

# **Therapist Adherence in the Treatment of Transdiagnostic Binge Eating Disorders**

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By

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*Hāpaitia te ara tika pūmau ai te rangatiratanga mo ngā uri whakatipu*

Foster the pathway of knowledge to strength, independence and growth for the future generation.

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## **Abstract**

Therapist adherence is a component of treatment integrity pertaining to whether activities in psychotherapy are aligned to the intended treatment approach. It is important to establish what occurs during the course of psychotherapy so that determinations of treatment efficacy can be made accurately. Studies suggest that treatments are distinguishable by ratings made using measurement tools designed to measure therapist adherence. Mixed findings are reported in the literature as to what happens to adherence over the early, middle and late phases of psychotherapy. Ratings of three therapy sessions from participants ( $n = 112$ ) who completed a randomised clinical trial comparing cognitive behavioural therapy, appetite focused cognitive behavioural therapy and schema therapy for transdiagnostic binge eating comprises the data for this study. Two hypotheses were generated. Firstly, that the three therapy types would be distinguishable by raters blind to the treatment participants were assigned to. Secondly, that the rating scores of two therapy non-specific subscales will be comparable across the three therapy types. An exploratory analysis was undertaken to examine adherence across the early, middle and late stage of therapy. Results indicate that therapy type was distinguishable by mean subscale rating scores and that the non-specific subscales were comparable regardless of treatment randomisation. The exploratory analysis indicated that there were differences in adherence across phase for the whole sample, with differences in the cognitive behavioural therapy and appetite focused cognitive behavioural therapy subscales, but not the schema therapy subscale. No significant phase by therapy effects were found. Understanding what occurs in psychotherapy informs treatment delivery and has potential to improve outcomes for those with eating disorders.

## **Introduction**

The use of psychotherapy as a treatment for eating disorders is well established and its efficacy widely studied (Grenon et al., 2018). More effective treatments have been called for, with new approaches aiming to improve treatment outcomes (Emmelkamp et al., 2013; Hay, 2013). The way treatment is implemented by clinicians is important when treatment outcomes are being assessed and compared (Andony et al., 2015; Waskow, 1984) and when mechanisms of the therapeutic process are being investigated (Ablon & Jones, 2002; Folke et al., 2017). Whether treatment was implemented in the way it was intended is essential to establishing experimental validity in randomised controlled trials (RCTs) and accurately reporting treatment effectiveness (Brauhardt et al., 2014; Perepletchikova, Hilt, Chereji, & Kazdin, 2009; Perepletchikova, Treat, & Kazdin, 2007). Therapist adherence, therapist competence and treatment differentiation are key factors of treatment fidelity in psychotherapy research (Perepletchikova et al., 2007; Schoenwald & Garland, 2013).

## **Adherence**

Therapist adherence refers to the extent that therapists use prescribed interventions; those considered appropriate or aligned to a therapeutic approach (Hill, O'Grady, & Elkin, 1992; Waltz, Addis, Koerner, & Jacobson, 1993). Adherence is concerned both with use of prescribed interventions and avoidance of proscribed interventions (Waltz et al., 1993; Wampold, 2001). At its core, therapist adherence addresses the question of whether the treatment was delivered in the way it was intended to be (Hogue, Liddle, & Rowe, 1996; Perepletchikova et al., 2007).

Treatment adherence encapsulates issues of patient adherence to the recommended treatment regime, such as taking medication or completing therapy related homework

tasks that are outside the control of the therapist delivering the treatment (Dunbar-Jacob & Mortimer-Stephens, 2001). Therapist competence pertains to how adequately the therapist uses skills to apply techniques (Hill et al., 1992; Waltz et al., 1993). Treatment differentiation is whether treatments differ from each other in critical dimensions (Perepletchikova et al., 2007; Waltz et al., 1993).

Reports are mixed as to the association between therapist adherence and treatment outcome. A positive association between therapist adherence and treatment outcome has been found by Folke et al. (2017) in a study of enhanced cognitive behavioural therapy (CBT-E) for bulimia nervosa. Higher therapist adherence ratings in the early and middle phases of therapy were associated with a statistically significant reduction in the frequency of bingeing at the end of treatment. In interpersonal treatment for depression, therapist adherence to treatment was strongly related to improved outcome (Spanier, Frank, McEachran, Grochocinski, & Kupfer, 1996). Specific facets of therapist adherence (behavioural methods and homework) have been found to predict reduced dropout from psychotherapy for depression (Cooper et al., 2016). Other authors have found that strict adherence to manuals can have a negative impact in some therapeutic circumstances (Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010). In a RCT of four treatments for depression, a negative correlation was found between focus on central aspects of the cognitive therapy rationale and treatment outcome where there was difficulties in the client therapist relationship (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996). Therapist attempts to negotiate and structure sessions were found to be associated with greater likelihood of dropout (Cooper et al., 2016). In a meta analysis of therapist adherence and its association with treatment outcome, Webb, DeRubeis, and Barber (2010) found adherence to have little effect on symptom change.



## **Manual based psychotherapy**

Adherence research arose in response to the development of manual based treatments in the 1960's (Luborsky & DeRubeis, 1984). Treatment manuals and training programmes allow for the specification of therapeutic ingredients, therapist behaviours, and intervention strategies so therapists can deliver treatments as intended by the developers (Ball, 1998). Manuals address a growing concern about the internal validity of psychotherapy research and a growing demand for validated outcome studies (Wallace & von Ranson, 2011). It is thought that use of manuals increases therapist adherence when paired with regular supervision and assessment of adherence to combat therapist drift (Barber, Krakauer, Calvo, Badgio, & Faude, 1997; Waller & Turner, 2016; Waltz et al., 1993). In a study of therapist adherence pre and post supervision to time limited dynamic psychotherapy, post supervision adherence ratings were higher than adherence ratings in the pre supervision therapy session (Anderson, Crowley, Patterson, & Heckman, 2012). The implication of this study is that therapist adherence can be manipulated by promotion and attention being given to how psychotherapy is being conducted by the therapist. In a meta analysis of 15 psychotherapy outcome studies, manualization of treatment was found to reduce therapist effects and the differences between therapists compared with studies where no treatment manual was used (Crits-Christoph et al., 1991). Therapists' attitudes towards treatment manuals may have resulted in manuals not being utilised in clinical practice (Addis & Krasnow, 2000; Moncher & Prinz, 1991). In a survey of almost 900 practicing psychologists, six percent reported using manuals often or exclusively in their practice (Addis & Krasnow, 2000). In a more recent survey of 750 mental health clinicians, fewer than 10% of those surveyed indicated routine incorporation of manuals into their practice, although most did incorporate them to some extent

(Becker, Smith, & Jensen-Doss, 2013). This apparent disconnect between the use of manual based psychotherapy in RCTs and use in the clinical environment may explain some of the variability reported in treatment outcome (Smink, van Hoeken, & Hoek, 2013).

### **Measurement of therapist adherence**

Treatment manuals are essential to measurement of therapy activity, as an accurate scale cannot be developed without a treatment approach that is clearly defined. A number of scales have been developed to measure therapist adherence, but the validity of some scales has not been established due to the scales not being used in multiple studies (Waltz et al., 1993). Ratings by patients, therapists, supervisors and observers have been used to measure treatment fidelity, with the preferred method being observer report due to bias that could affect the accuracy of patient and therapist ratings (Adams, Soumerai, Lomas, & Ross-Degnan, 1999; Denny, Gibbons, Barber, Gallop, & Crits-Christoph, 2012). Ratings from clinical supervisors have also been reported as higher than ratings of independent judges in a RCT of three treatments for cocaine dependence (Denny et al., 2012).

Chevron and Rounsaville (1983) examined whether the type of material rated influenced measurement of adherence, finding a low correlation between videotape ratings and those made using process notes. It is suggested that the source of the material to be rated should retain the most information as available (Waltz et al., 1993). Constructs to be rated in psychotherapy differ in their ease of identification and it has been suggested that raters who do not have training in administering psychotherapy may not be able to accurately rate certain types of material (Waltz et al., 1993). It is desirable that measurement scales measure both occurrence-non occurrence and frequency (Waltz et al., 1993). Few therapist adherence studies have

been reported; it is evident that the process of rating is time consuming and a substantial undertaking and it has been noted that this could be a reason why this is the case (Rapley & Loades, 2018; Webb et al., 2010).

### **Adherence studies**

Psychotherapy type is able to be distinguished when raters are blind to what type of therapy is being administered (Luborsky & DeRubeis, 1984). Luborsky, Woody, McLellan, O'Brien, and Rosenzweig (1982) developed an adherence rating scale that was able to show drug counselling, supportive expressive therapy and cognitive behavioural therapy (CBT) for narcotic addiction were able to be discriminated. DeRubeis, Hollon, Evans, and Bemis (1982) used the Minnesota Therapy Rating Scale to differentiate CBT from interpersonal psychotherapy (IPT). Luborsky et al. (1982) formulated a rating scale that was used to rate fifteen-minute audio recordings from therapy sessions for drug counselling, CBT and supportive expressive psychotherapy for patients with narcotic addiction. They reported that raters were able to identify the intended therapy in 70% of cases and this accuracy was improved to 80% with the augmentation of the rating form to include further therapy specific items.

Raters in a study of CBT and IPT treatments for bulimia nervosa correctly identified therapy type in one hundred percent of sessions rated (Loeb et al., 2005). Similar levels of rater accuracy are reported by Bendall et al. (2015), with ninety six of ninety nine therapy session ratings correctly identified as the therapy delivered in a trial of CBT versus a befriending therapy for psychosis. In a RCT for anorexia nervosa, McIntosh et al. (2005) found CBT, specialist supportive clinical management (SSCM) and IPT were clearly distinguishable by blind raters. The mean score on the subscale for each modality was elevated relative to the subscales pertaining to the

other modalities. Eighty six percent of treatment audiotapes rated in the Strong Without Anorexia Nervosa Study (SWAN) were correctly identified as the treatment assigned in a RCT comparing CBT-E, SSCM and Maudsley Model of Anorexia Treatment for Adults (MANTRA) (Andony et al., 2015).

Carroll et al. (1998) found good discrimination using the Matching Alcoholism Treatments to Client Heterogeneity (MATCH) Tape Rating Scale, between CBT, motivational enhancement therapy, and 12-step facilitation in alcoholism treatment. Manualised techniques associated to the assigned therapy type of the participant were used, with little use of techniques associated with the other two therapy approaches. Brauhardt et al. (2014) found 74.6% of rated CBT treatment sessions for binge eating disorder met criteria for excellent adherence, with 2.6% rated as containing inadequate levels of adherence.

These findings across various types of psychotherapy and disorders affirm that therapy is distinguishable by raters who are unaware of what therapy is being delivered. An interesting development in adherence research is measurement of adherence to type of therapy administered via videoconferencing or telephone (Hartley et al., 2014; Morland et al., 2011). In the study by Morland et al. (2011), the measurement scale comprised 253 dichotomous items and levels of adherence were found to be comparable to adherence levels when the same therapy was administered in person in a traditional face-to-face psychotherapy setting. A critique of the study is that the scale used was only assessing occurrence or non-occurrence and did not include any measure of the quantity of techniques used. Hartley et al. (2014) developed the Recovery Oriented CBT for Psychosis: Supported Self Help and Telephone Therapy Adherence Scale (ROSTA) to measure adherence to CBT for Psychosis and includes a subscale relating to treatment delivery over the telephone.

Adherence to treatment was high and measures of the internal validity of the scale were also found to be very high (Cronbach's  $\alpha = .94$ ). Brauhardt et al. (2014) used the Adherence Control Form (ACF) to investigate therapist adherence to CBT and a form of internet based self help in binge eating disorder treatment. High levels of adherence were found and the psychometric properties of the ACF were adequate (Cronbach's  $\alpha = .80$ ).

### **Collaborative Study Psychotherapy Rating Scale (CSPRS)**

The Collaborative Study Psychotherapy Rating Scale (CSPRS, Evans, Piasecki, Kriss, & Hollon, 1984) was developed to measure adherence to three therapies for depression, CBT, IPT and clinical management with Imipramine or tablet placebo (Elkin, Parloff, Hadley, & Autry, 1985). The scale was found to discriminate among CBT, IPT and clinical management, with analysis of variance of CSPRS subscale scores showing that more behaviours appropriate to each respective treatment approach were used for that treatment than those associated to the other treatments (Hill et al., 1992).

An observation made by DeRubeis and Feeley (1990) was that when examining the CSPRS, there were different types of cognitive therapy related procedures being measured. Using two of the CSPRS subscales to examine change in treatment of depression, it was found that symptom focused procedures such as examining evidence concerning beliefs or labeling cognitive errors were associated with outcome rather than abstract processes related to the therapy session itself (such as negotiating content, explaining direction of the session). In a further study, Baranackie, Crits-Christoph, and Kurcias (1992) used the same two subscales from the CSPRS showing they could discriminate opiate using patients who had received cognitive therapy and those who had received dynamic therapy.

The aim during the development of the CSPRS scale was to ensure it accurately measured central components of the therapy types used. Hill et al. (1992) defined adherence as therapists being rated as scoring higher on scales designed to tap the essential behaviours of their treatment approach than on scales designed to tap the essential behaviours of other treatment approaches. The 96-item CSPRS includes a 28-item Cognitive–Behavioural Rating Scale that consists of six subscales: Cognitive rationale, assessing cognitive processes, evaluating and changing beliefs, behavioural focus, homework, and collaborative structure (Barber, Liese, & Abrams, 2003; Hollon et al., 1988).

The CSPRS has been adapted for use in anorexia nervosa with good results (Andony et al., 2015; McIntosh, Jordan, McKenzie, et al., 2005). A ninety item CSPRS was adapted to investigate adherence to CBT, IPT and SSCM. The modified CSPRS (CSPRS-AN) was able to differentiate the three treatments reliably, with the mean subscale score for each specific therapy elevated relative to the other two therapies (McIntosh, Jordan, McKenzie, et al., 2005). The CSPRS-AN was then again adapted for the SWAN study where enhanced CBT, MANTRA and SSCM were compared (Andony et al., 2015). Again, this adaption of the CSPRS-AN was able to reliably distinguish the three therapies being implemented in the study.

The Collaborative Study Psychotherapy Rating Scale for Binge Eating (CSPRS-BE) is a further adaptation of the CSPRS, modified to reflect content of three therapies used in a RCT for treatment of transdiagnostic binge eating (McIntosh, Jordan, Carter, Frampton, et al., 2016). The modified scale includes a subscale for each treatment; CBT, appetite focused cognitive behavioural therapy (CBT-A) and schema therapy (ST). It also includes a set of overlap items that are expected to occur in all three treatments and two non-specific subscales designed to measure non-

specific elements of therapy expected to occur equally across the three therapies, facilitative conditions and explicit directiveness (Appendix B).

### **Therapist adherence associated with treatment phase**

Individual psychotherapy is dynamic and tailored to the patient receiving the treatment. Therapy content changes as psychotherapy progresses with different types of activities being undertaken depending on the treatment and the stage of treatment. Very little is known about what occurs in the early, middle and late phases of therapy due to the fact that few therapist adherence studies examine adherence across the course of treatment (Folke et al., 2017). Adherence can be measured across the duration of treatment by therapy sessions being rated from different phases of treatment. Studies that have examined therapist adherence over phase have reported differing findings about what occurs over the course of treatment. Hollon et al. (1988) reported lower scores on the CBT subscale in the final therapy phase than in earlier phases and higher scores on the clinical management subscale in the initial phase than the middle and late phases of therapy. Hill et al. (1992) did not replicate the finding of Hollon et al. (1988) in relation to CBT, finding an increase on the CBT subscale after the first session and that the increase was maintained throughout the other phases of therapy. Hill et al. (1992) did replicate the finding that clinical management scores were higher in the first phase than in the middle and late phases of therapy.

Imel, Baer, Martino, Ball, and Carroll (2011) found no difference in adherence across phases of motivational enhancement therapy. A significant decline in adherence was reported by Boswell et al. (2013) over the course of CBT treatment for panic disorder. This decline in adherence over phase was replicated by Folke et al. (2017) in CBT-E treatment for bulimia nervosa, with adherence decreasing over time at a rate of approximately 0.23 units per 10 sessions. Loeb et al. (2005) reported that

CBT was associated with higher levels of adherence at all time points compared with IPT. McIntosh, Jordan, Carter, Luty, et al. (2016) reported an increase in adherence in the middle phase of CBT and SSCM for anorexia nervosa. Increased scores in the middle phase of therapy on the CBT subscale were found regardless of what therapy the patient was randomised to receive.

Studies reporting findings of differences in adherence over phase of treatment are not unexpected, given the nature of therapy. Manuals setting out how therapy should be administered give a framework of the type of activity expected in treatment. For example, in CBT-A for eating disorders, retraining the individual to eat in response to internal appetite cues and education about hunger and satiety mechanisms and food choices are two key components of the therapy model (McIntosh, Jordan, Carter, Latner, & Wallace, 2007). It would be expected that in the initial phase of therapy, therapy activity relating to self-monitoring of hunger and fullness and development of an awareness of appetite would be present. Once the awareness is established, it would be expected that therapy activity would move to assist individuals to respond to the internal appetite cues they have identified. It would be expected that higher item scores would be reported on aspects of self monitoring appetite and satiety and appetite focused therapy rationale in the initial phases of therapy, with the possibility of lower item scores on measures such as identification of emotional cues for binge eating as this would become a focus later in therapy.

### **Therapist adherence in eating disorders treatment**

Eating disorders are serious psychological disorders, with anorexia nervosa, bulimia nervosa and binge eating disorder associated with increased risk of mortality (Suokas et al., 2013) due to medical complications as a result of the eating disorder or to suicidality (Klump, Bulik, Kaye, Treasure, & Tyson, 2009). Ongoing, untreated



bulimia nervosa and binge eating disorder can have severe medical consequences such as hair loss, growth retardation, osteoporosis, loss of tooth enamel, gastrointestinal bleeding, bowel paralysis, dehydration, electrolyte abnormalities and weight related conditions such as type two diabetes (Klump et al., 2009). Comorbidity between eating disorders and other psychological disorders is high, with lifetime rates of additional diagnoses reported to be as high as eighty percent (Hudson, Hiripi, Pope, & Kessler, 2007) . Only a small proportion of those who meet diagnostic criteria for an eating disorder seek treatment, and those who do seek treatment often do so after many years of dysfunction (Hoek & van Hoeken, 2003; Schaumberg et al., 2017). An association between longer duration of illness and poor outcome in bulimia nervosa has been found, with severity of illness and comorbidity with other psychological disorders being significant predictors of outcome (Steinhausen & Weber, 2009). In general it is thought that the prognosis of full recovery is greater when the disorder is identified early and treatment is administered swiftly (Schaumberg et al., 2017).

Psychological treatments are widely used to treat eating disorders, with CBT and IPT established as effective treatments for bulimia nervosa and binge eating disorder (Schaumberg et al., 2017). However, even with treatment, a substantial portion of those with bulimia nervosa or binge eating disorder do not improve (Wilson, Grilo, & Vitousek, 2007). Providing treatments with proven efficacy for eating disorders is of great importance due to the severity and chronic course of these disorders (Griffiths, Rossell, Mitchison, Murray, & Mond, 2018). Steps taken to refine treatments are a way to improve the outcome of eating disorder treatment, such as the small number of studies that have examined therapist adherence in eating disorder treatment (Andony et al., 2015; Brauhardt et al., 2014; Folke et al., 2017; Loeb et al., 2005; McIntosh, Jordan, McKenzie, et al., 2005).

## **A randomised controlled trial of psychotherapies for transdiagnostic binge eating**

The RCT on which the current study is based compared three treatments for transdiagnostic binge eating (McIntosh, Jordan, Carter, Frampton, et al., 2016). One hundred and twelve participants who met criteria for bulimia nervosa or binge eating disorder attended psychotherapy for twelve months, with six months of weekly sessions, followed by six months of monthly sessions. Participants were randomised to receive CBT, CBT-A or ST (McIntosh, Jordan, Carter, Frampton, et al., 2016).

Binge eating is characterized by binge eating episodes where an abnormally large quantity of food is consumed in a discrete time period with the experience of dyscontrol. Transdiagnostic binge eating disorders incorporate both bulimia nervosa and binge eating disorder diagnoses. Bulimia nervosa is characterized by repeated episodes of binge eating followed by inappropriate compensatory behaviours such as self-induced vomiting; misuse of laxatives, diuretics, or other medications, fasting; or excessive exercise. Binge eating disorder is characterized by recurrent episodes of binge eating and the absence of regular compensatory behaviours characteristic of bulimia nervosa (American Psychiatric Association, 2000). A study examining two interventions for bulimia nervosa by Loeb et al (2005) represents one of few published studies of treatment adherence in bulimia nervosa. Adherence to CBT and IPT was measured by rating 284 full therapy audiotapes from a multisite RCT. It was found that adherence levels were higher in the CBT treatment at all time points than in IPT. One other study examining therapist adherence in CBT and an internet based psychotherapy for binge eating disorder is that of Brauhardt et al. (2014). Cognitive behavioural therapy was compared with internet based guided self help (INTERBED-study), finding that over 70% of the rated sessions exhibited excellent levels of

adherence on a Likert-type rated one to three (an ACF score of 1.50 or higher was deemed excellent adherence).

Cognitive behavioural therapy when applied to binge eating disorder and bulimia nervosa helps the client to identify and attempt to change dysfunctional thinking about food, eating, weight and body shape, with the model recognizing that such thoughts are key to the onset and maintenance of disordered eating behaviours (McIntosh, Jordan, Carter, Frampton, et al., 2016). Correction of the disordered eating behaviour is achieved by the identification and evaluation of unhelpful thinking, understanding and managing cues for binge eating, and through education and advice about resuming normal eating. CBT treatment in the RCT was manual based, adapted from previous CBT treatments for bulimia nervosa and anorexia nervosa, based on traditional CBT for binge eating (Fairburn & Wilson, 1993) and used in prior randomised controlled trials by the research team (Bulik, Sullivan, Carter, McIntosh, & Joyce, 1998; McIntosh, Jordan, Carter, et al., 2005).

Appetite focused cognitive behavioural therapy is a variation of CBT in which advice about food choices focuses on identification of and appropriate response to hunger and satiety cues. All self-monitoring tasks emphasise being aware of hunger and fullness cues, encouraging responding to moderate feelings of hunger by eating and to moderate levels of satiety by cessation of eating (McIntosh et al., 2007). Education about food choices and how different food types influence satiety is at the core of the treatment. Identification of non-appetite-related emotional or situational cues is encouraged, with appropriate non-food related responses explored (McIntosh et al., 2007).

Schema therapy is a treatment development from CBT that focuses on the identification and modification of maladaptive schemas so that core psychological

needs (such as safety, acceptance and protection) can be met (Young, Klosko, & Weishaar, 2003). Modification of maladaptive schemas is hypothesised to lead to change in the eating disorder mechanism, as the maladaptive schemas formed from early life experiences are thought to underpin and maintain the disorder. Imagery and other experiential techniques are used to bring about change, with the adult self able to bring a more mature perspective with rational thought and responsivity to childhood events (Ohanian, 2002). Identifying, challenging and restructuring schemas are core to ST for eating disorders (McIntosh, Jordan, Carter, Frampton, et al., 2016).

The primary outcome measure for the clinical trial was frequency of objective binge episodes. Secondary outcome measures included abstinence from binge eating, frequency of purging, eating disorder remission, dietary restraint, eating, weight and shape concerns, global eating disorder severity, drive for thinness, body dissatisfaction and bulimia Eating Disorder Inventory (Garner, 1991) subscales and Global Assessment of Functioning (Endicott, Spitzer, Fleiss, & Cohen, 1976), Axis V of DSM-IV. No differences were found for primary or secondary outcomes among the three treatments at the end of the RCT or at the 12 month follow up (McIntosh, Jordan, Carter, Frampton, et al., 2016). In such a trial with comparable outcomes among different therapies, it is important to determine the distinctiveness of the treatments delivered. Examining adherence to treatment modalities helps to determine overlapping and distinctive activities in the three therapies.

## **Summary**

It has become increasingly important in the task of evaluating effectiveness of psychotherapies to clearly define the treatment and to determine whether the treatment administered is aligned to the therapy model. Therapist adherence is part of treatment fidelity and allows an assessment to be made as to whether interventions

prescribed by the treatment manual were provided in psychotherapy. A number of studies has examined therapist adherence and reported consistently that different psychotherapies could be identified by raters blind to the therapy being administered. Mixed findings have been reported as to what happens to adherence across the duration of therapy. Measurement tools have been developed to measure therapist adherence; with few used in multiple studies across different demographics and psychotherapies. The CSPRS has been used across different RCTs and has been successfully adapted to measure the core components of different psychotherapies. Only a small number of studies has examined therapist adherence in psychotherapy for eating disorders and even fewer in bulimia nervosa or binge eating disorder. The serious nature of eating disorders warrants further therapist adherence studies in this area in order to improve treatment outcome and efficacy.

### **The current study**

The current study examines therapist adherence in a RCT of CBT, CBT-A and ST for binge eating disorders by rating audio recordings of therapy sessions using an adaptation of the CSPRS, the Collaborative Study Psychotherapy Rating Scale for Binge Eating (CSPRS-BE). One recording from each of the early, middle and final phases of treatment was rated and analysed to examine therapist adherence to the three types of therapy being delivered and to investigate whether changes in therapist activity occurred over phases of treatment in each therapy type administered. It is hypothesised that the three psychotherapies will be distinguishable from each other and that this will be shown by sessions of each therapy type being rated higher on its own subscale than sessions of the other two treatments. Participants randomised to CBT-A will score higher on the CBT-A subscale than participants randomised to ST or CBT. Participants randomised to CBT will score higher on the CBT subscale than

participants randomised to CBT-A or ST. Participants randomised to ST will score higher on the ST subscale than participants randomised to CBT or CBT-A. It is hypothesised that the mean rating scores of items contained in the two therapy non-specific subscales will be comparable across the three therapy types. Due to the mixed findings about adherence across phase of therapy, an exploratory analysis will be undertaken to investigate therapist adherence across phase.

## **Method**

### **The clinical trial**

Ratings of therapy sessions from the randomised clinical trial of three psychotherapies for binge eating comprise the data for the current study. McIntosh, Jordan, Carter, Frampton, et al. (2016) compared the efficacy of cognitive behavioural therapy, appetite focused cognitive behavioural therapy and schema therapy for binge eating. The trial received ethical approval from the Upper South Regional Ethics Committee (CTB/04/08/139) (Appendix A) and was conducted in Christchurch, New Zealand between May 2005 and October 2010. Human ethics approval (Appendix B) and Māori consultation (Appendix C) were sought and approved for the current study.

### **Participants**

One hundred and twelve female participants comprise the sample for the current study. Participants were aged 16-65, with a primary DSM-IV bulimia nervosa or binge eating disorder diagnosis, with objective binge eating episodes. Binge episodes are defined as the consumption of an abnormally large quantity of food within a discrete time period with the subjective experience of dyscontrol. Participants were not underweight at the time of entry to the RCT. Exclusion criteria were other conditions requiring treatment such as severe major depression or serious suicidal intent, severe psychoactive substance dependence, bipolar I disorder, schizophrenia, severe physical illness including severe medical complications of the eating disorder. Cognitive impairment, psychotropic medication, and an adequate trial of CBT or ST in the past year were also exclusion criteria (McIntosh, Jordan, Carter, Frampton, et al., 2016).

## Therapy

Participants were randomly assigned to receive CBT, CBT-A or ST weekly for six months then monthly for six months. A minimum of fifteen weekly sessions and three monthly sessions was considered *a priori* to be completion of an adequate course of therapy. Therapy sessions were approximately 50 minutes duration and were all audio recorded.

CBT was manual based and adapted from previous CBT trials for bulimia nervosa and anorexia nervosa based upon traditional CBT for binge eating (Fairburn & Wilson, 1993). CBT comprised three overlapping phases. Firstly, the rationale for CBT and the required self-monitoring and homework techniques were introduced. Appropriate portion size, regularity and variety of eating were prescribed, and participants learned skills for managing binge eating including stimulus control and cue identification (McIntosh, Jordan, Carter, Frampton, et al., 2016). Further CBT skills were taught in phase two, with thought challenging and restructuring alongside techniques to avoid binge eating. Skills to identify cue-behaviour-consequence sequences were also taught, with psychoeducational materials given. The nature of phase three is to prepare the patient for termination by giving information and strategies about the relapse and recovery process (McIntosh, Jordan, Carter, Frampton, et al., 2016).

CBT-A was an adaptation of CBT that focuses on identification and appropriate response to hunger and satiety cues (McIntosh et al., 2007). The key difference between CBT and CBT-A is the focus upon appropriate response to appetite, hunger as a cue for eating and re-education of the patient to identify physical responses and respond to them. Therapy begins with the introduction of a cognitive



behavioural model of binge eating, with information provided about the influence of sociocultural factors on eating disorders (McIntosh et al., 2007). Principles of normal eating are provided, with the expectation that self monitoring and recording of food and fluids consumed will be completed. If there are experiences of overeating, the patient is to record the context of its occurrence. Self monitoring is for the purpose of identification of problem eating and to track progress (McIntosh et al., 2007).

Cognitive strategies focus upon changing dysfunctional thoughts the patient has about food and other behaviours related to the eating disorder. As in CBT therapy, a relapse prevention strategy is formulated near the end of therapy, with setbacks conceptualized as normal and plans made to navigate relapses if they occur after the conclusion of therapy (McIntosh et al., 2007).

Schema therapy originates from CBT with the rationale that cognitive structures are formed (schema) by eating disordered individuals about issues of weight that influence their thoughts, feelings and behaviour (Vitousek & Hollon, 1990). The maintenance of such schema is thought to feed into the maintenance of the disorder eating behaviour (Vitousek & Hollon, 1990). Therapy focuses on the identification and modification of maladaptive schemas so that core psychological needs (such as safety, acceptance and protection) can be met (Young et al., 2003). Binge eating is thought to allow schemas to be avoided (McIntosh, Jordan, Carter, Frampton, et al., 2016). Modification of maladaptive schemas is hypothesised to lead to change in the eating disorder by changing schema level beliefs that are underpinning the eating disorder (Young et al., 2003). Imagery and other experiential techniques are used to bring about change, with the adult self able to bring a more mature perspective with rational thought and responsivity to childhood events (Ohanian, 2002).

## **Therapists**

Four female registered clinical psychologists provided the therapies after completion of training in the three therapy modalities (McIntosh, Jordan, Carter, Frampton, et al., 2016). All therapists delivered all three treatments (McIntosh, Jordan, Carter, Frampton, et al., 2016)

## **Measures**

### **Collaborative Study Psychotherapy Rating Scale — Binge Eating (CSPRS-BE)**

Adherence was measured using the Collaborative Study Psychotherapy Rating Scale for Binge Eating (CSPRS-BE), an adaptation of the original CSPRS scale (Evans et al., 1984). The CSPRS-BE comprises five subscales, three therapy specific subscales, CBT, CBT-A and ST. It also contains two therapy non-specific subscales, facilitative conditions and explicit directiveness. The CSPRS-BE is comprised of 98 items that are randomly ordered within the rating scale (Appendix E). Each item in the scale is rated on a seven point Likert-type scale. The CSPRS-BE was developed for the current study after its previous adaptation to rate psychotherapy for anorexia nervosa (McIntosh, Jordan, McKenzie, et al., 2005).

The psychometric properties of the original CSPRS and its adaptations support its use as an adherence measurement tool in this study. Hill et al. (1992) found acceptable levels of internal consistency (Cronbach's alpha) for all therapy specific subscales (IPT, CBT, clinical management) and facilitative directiveness. The only subscale that was not reported to have acceptable levels of internal consistency is that of the explicit directiveness subscale. McIntosh, Jordan, McKenzie, et al. (2005) reported all therapy subscales (SSCM, IPT, CBT) and the therapy non-specific subscale to have high internal consistency by high Cronbach's alpha levels. The non-specific subscale contained both the facilitative conditions and explicit directiveness

items as one subscale. Andony et al. (2015) reported acceptable Cronbach's alpha levels for CBT-E and MANTRA and SSCM.

The CBT subscale is comprised of 31 CBT items that are common to CBT and CBT-A, 14 overlap items that are common to all three therapies, and 3 CBT normalizing eating items specific to CBT. The total number of items in the CBT subscale is 48. The CBT-A subscale is comprised of 31 CBT generic items, 10 specific CBT-A items that do not overlap with either ST or CBT and 14 overlap items to give a total of 55 items. The ST subscale is comprised of 28 ST specific items that do not overlap with either CBT or CBT-A and 14 overlap items giving a total of 42 items. Therapy non-specific items are items that are expected to be present in all psychotherapies, regardless of type. The items measure aspects of therapist behaviour and collaborative tasks such as rapport, collaboration and negotiation of therapy content. Twelve therapy non-specific items comprise two subscales, facilitative conditions (eight items) and explicit directiveness (four items). (Appendix D).

## **Procedure**

### **Raters**

Eight female raters, postgraduate psychology students or clinical psychologists were trained to rate the CSPRS-BE.

### **Rater training**

Raters were initially given didactic training about the three therapy types and the CSPRS-BE. Co-rating with trainers was then undertaken until overall consistency in rating was reached. Raters rated sessions independently and met regularly to review session ratings to reduce rater drift.

### **Selection of therapy sessions**

Three sessions, one from early, middle and late stages of therapy for each participant were rated. Stages of therapy are defined as early (sessions 1 to 5), middle and late (the last five sessions). The first and final therapy sessions were excluded from rating due to the difference in therapeutic tasks that take place in those sessions (Andony et al., 2015; Hill et al., 1992). For participants who did not complete the full course of therapy, sessions with the greatest available diversity were selected depending on when participants stopped attending. This resulted in some participants' sessions being sampled from only the early phase or from early and middle phases. Oversampled sessions were excluded from the phase analysis but included in the analysis of scale properties and overall adherence ratings. Three hundred and thirty six sessions were randomly selected and rated as primary ratings.

### **Rating of adherence**

Audio recordings of full therapy sessions were listened to and rated using the CSPRS-BE. Participants were identified by ID numbers, which ensured that the confidentiality of participants and therapy information was maintained.

## **Data Analysis**

### **Data management**

Ten percent of the data were checked for data entry error and missing data points against the physical rating sheets. Normality of the dependent variables was examined by visual inspection of histograms with superimposed normal distribution, visual inspection of q-q normal and detrended q-q plots and box and whisker plots of the spread of data points and examination of the Shapiro-Wilk test statistic.

### **Statistical analyses**

Data were analysed using IBM Statistical Package for the Social Sciences (SPSS) software (IBM Corporation, 2017).

### **Internal consistency**

Internal consistency of CSPRS-BE subscales was assessed by calculating Cronbach's alpha.

### **Analysis of variance**

Analyses of variance (ANOVA) were calculated to compare adherence ratings among the three treatment groups (CBT, CBT-A and ST) for CSPRS-BE subscales. Where a significant difference was found among the three groups, Fisher's LSD tests were calculated to test the effect between the pairs. Repeated measures analyses of variance were conducted to examine each treatment group at three time points to investigate whether the pattern of adherence to therapy activity varied across early, middle and late phases of treatment. Phase of therapy was the repeated measure and therapy group the between subject factor in these repeated measures analyses of variance. Fisher's LSD tests were calculated where a significant phase by therapy effect was indicated by the analysis of variance.

## Results

Table 1 shows demographic characteristics of the total sample of 112 women who met inclusion criteria for the RCT. Sixty seven percent of participants identified as New Zealand European, 17% as non-New Zealand born Caucasian, 9.8% as Māori and 4% as Asian. Mean age of the sample was 35.3 years. Sixty percent of the sample were married. Over half of the sample (54.5%) were employed; the mean number of years of education was 15.4 years, corresponding to completion of high school and some further education. Mean current weight of the sample was 83.2kg with a mean BMI of 30.0. Mean lowest weight of participants was 61.0kg and highest of 91.6kg. Mean eating disorder length was 15.2 years indicating a long duration of disordered eating behaviours.

Table 1

*Age, Marital Status, Ethnicity, Education, Employment and Physical Characteristics for 112 Female Participants with Bulimia Nervosa or Binge Eating Disorder.*

	m/n	s.d/%
Age	35.3	12.6
Ethnicity		
NZ European	75	67.0
Non NZ European	19	17.0
Māori	11	9.8
Asian	4	3.60
Other	3	2.70
Married	68	60.7
Employed	61	54.5
Education (years)	15.4	2.9
Physical characteristics		
Current weight (kg)	83.2	22.4
Current BMI (kg/m <sup>2</sup> )	30.0	7.8
Highest weight (kg)	91.6	25.1
Lowest weight (kg)	61.0	11.9
Length of eating disorder (years)	15.2	12.7

Table 2

*Clinical Characteristics at Baseline – Psychopathology, History of Self-Harming Behaviours, Eating Disorder and Global Functioning Measures.*

Psychopathology		Total sample $n = 112$	
		m/n	s.d/%
Eating Disorder Examination			
	Restraint behaviours	2.9	1.5
	Eating concerns	3.2	1.2
	Weight concerns	3.7	1.3
	Shape concerns	4.2	1.3
Objective bulimic episodes	Past month	19.3	12.1
Bulimia nervosa	Lifetime	71	63
	Past month	58	52
Binge eating disorder	Lifetime	68	61
	Past month	54	48
Anorexia nervosa	Lifetime	8	7
Major depressive disorder	Lifetime	74	66
	Past month	30	26
Bipolar II disorder	Lifetime	4	3.6
	Past month	0	0
Obsessive compulsive disorder	Lifetime	9	8
	Past month	7	6
Post traumatic stress disorder	Lifetime	21	19
	Past month	10	9
Generalized anxiety disorder	Past month	23	21
Social phobia	Lifetime	30	27
	Past month	26	23
Alcohol use disorder	Lifetime	38	34
	Past month	5	4
Substance disorder	Lifetime	25	22
	Past month	3	3
Suicide attempt ever		20	18
Deliberate self harm ever		33	29
Global assessment of functioning		55.1	4.7

*Note.* Global Assessment of Functioning, Axis V of DSM-IV.

Table 2 shows baseline clinical characteristics of the sample ( $n = 112$ ). Over half had a lifetime prevalence of bulimia nervosa (63%) and binge eating disorder (61%). The mean number of objective binges in the past month was 19.3 (s.d = 12.1) indicating a high frequency in variability of bingeing. A small percentage of the sample previously met criteria for anorexia nervosa (7%). Measures from the Eating Disorder Examination (Cooper & Fairburn, 1987) indicated disordered eating with

restraint (2.9), eating concerns (3.2), weight concerns (3.7) and shape concerns (4.2). Over two thirds of the sample had lifetime major depressive disorder (66%) and four participants had lifetime bipolar II disorder (3.6%). Lifetime prevalence of obsessive compulsive disorder was 8%. Rates of anxiety disorders were approximately one fifth for post traumatic stress disorder (19%), generalized anxiety disorder (21%) and social phobia (27%). Both alcohol and substance use disorders had low past month prevalence, 4% and 5% respectively, but higher lifetime prevalence of 34% and 22%. Twenty nine percent reported non-suicidal self-harm and 18% reported making a suicide attempt. Mean Global Assessment of Functioning was 55.1, which indicates moderate symptoms or functioning with some difficulty (Endicott et al., 1976).

Table 3

*CSPRS-BE Subscale Means and Standard Deviations for the CBT, CBT-A, ST Groups and Statistics.*

	ST	CBT	CBT-A	F	<i>p</i>
	mean (s.d)	mean (s.d)	mean (s.d)		
CBT subscale (pure + overlap <sup>#</sup> )	2.01 <sup>a</sup> (.35)	2.45 <sup>b</sup> (.42)	2.34 <sup>c</sup> (.42)	37.08	< .001
CBT-A subscale (pure + overlap <sup>#</sup> )	1.88 <sup>a</sup> (.32)	2.26 <sup>b</sup> (.36)	2.25 <sup>b</sup> (.41)	39.22	< .001
CBT-A specific items only	1.30 <sup>a</sup> (.38)	1.40 <sup>a</sup> (.34)	1.92 <sup>b</sup> (.70)	49.88	< .001
ST subscale	2.03 <sup>a</sup> (.43)	1.70 <sup>b</sup> (.18)	1.66 <sup>b</sup> (.19)	55.70	< .001
Facilitative conditions subscale	5.19 (.56)	5.21 (.50)	5.34 (.52)	2.43	.09
Explicit directiveness subscale	4.23 (.61)	4.39 (.58)	4.38 (.57)	2.56	.08

*Note.* <sup>#</sup> Data reported for CBT and CBT-A subscales include both pure items (unique to one therapy modality) and overlap items (items in both CBT and CBT-A subscales)

<sup>a</sup> Values with the same superscript are not significantly different ( $p < .05$ , Fisher's pairwise least significant difference test)

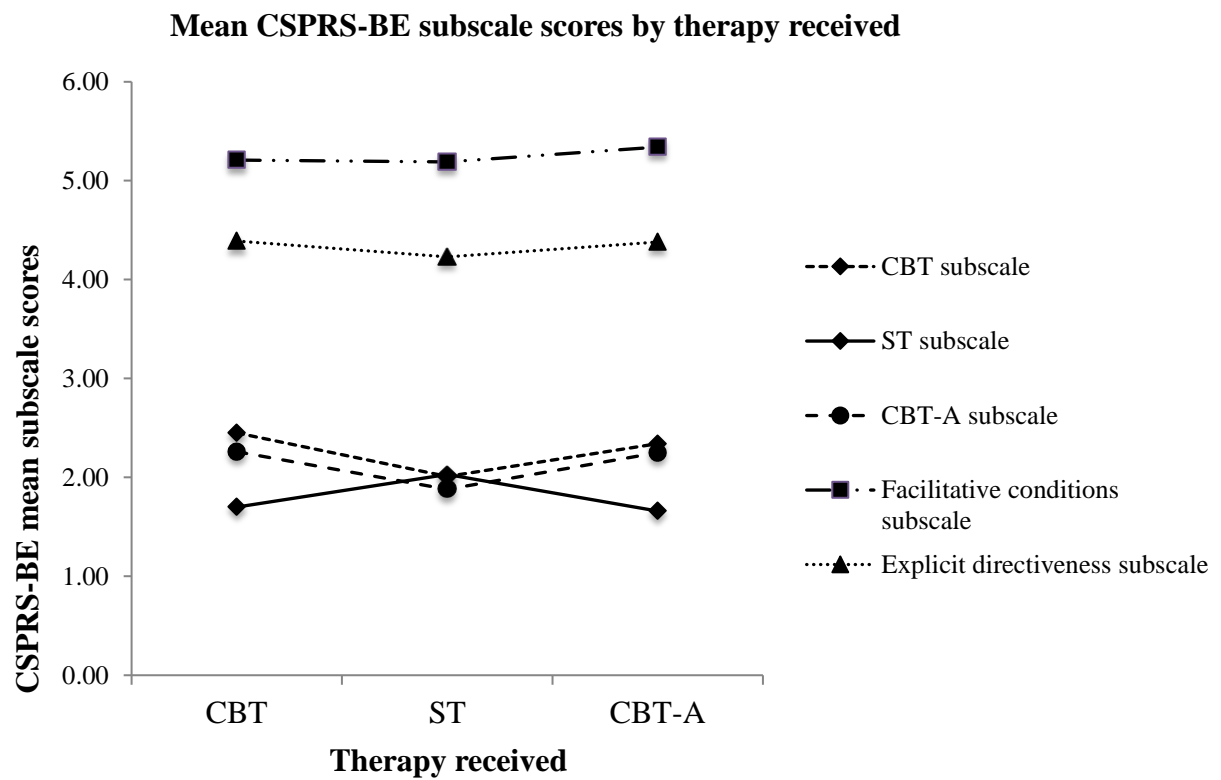


Table 3 shows mean (s.d) scores for the CBT, CBT-A and ST subscales, the two therapy non-specific subscales (facilitative conditions and explicit directiveness) and CBT-A specific items by therapy to which the individual was randomised.

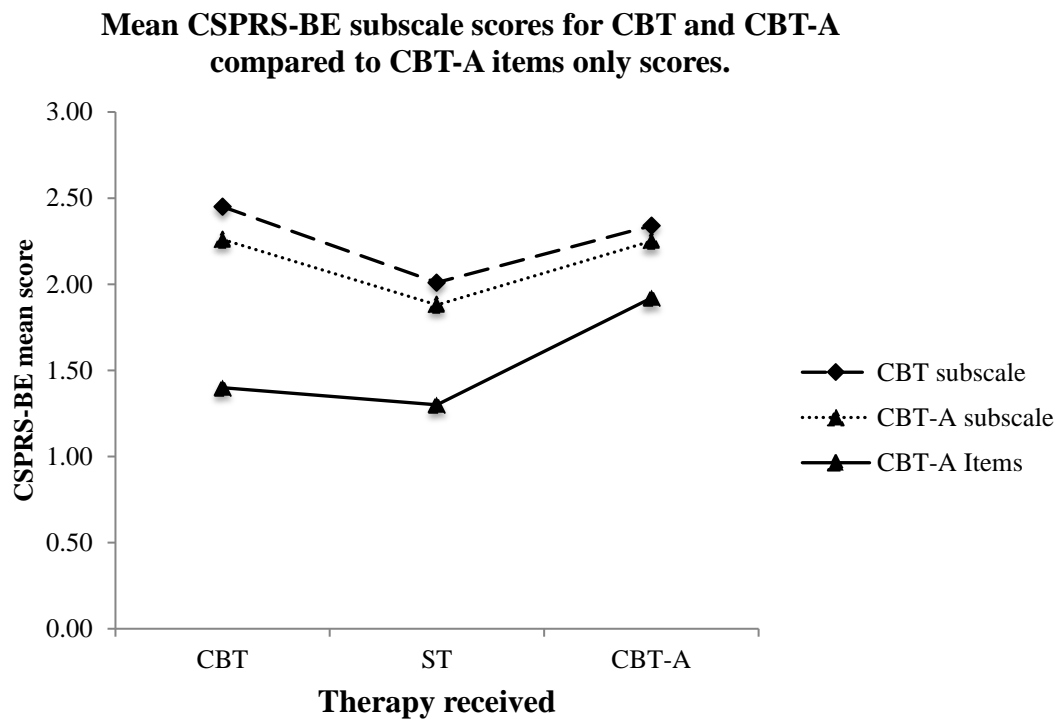
Analysis of variance indicated no significant difference among means of the two therapy non-specific subscales (facilitative conditions and explicit directiveness) for the three therapy groups. For the three therapy specific subscales, a significant therapy effect was found for the CBT, CBT-A and ST subscales. Mean scores for the CBT subscale were elevated relative to the ST and CBT-A groups indicating satisfactory adherence. Mean scores for the ST subscale were elevated relative to the CBT and CBT-A groups indicating satisfactory adherence.

The CBT-A subscale score was higher for participants who were randomised to CBT-A compared with those randomised to ST but was not different from those randomised to CBT. Analysis of variance was conducted for CBT-A only items excluding the CBT generic and fourteen overlap items. The mean score for CBT-A only items was significantly higher for the CBT-A group than for both the CBT and ST groups.

Figure 1 shows mean CSPRS-BE subscale scores by therapy received. Mean subscale scores of both the facilitative conditions and explicit directiveness items are consistent across the three therapy received groups. The CBT subscale score is highest for the CBT group and is higher than scores for the CBT-A and ST treatment groups. The ST subscale score is highest for the ST group and higher than scores for the CBT and CBT-A treatment groups. The CBT-A subscale score is highest for the CBT-A group and is higher than the score for the ST group, but not for the CBT group.



**Figure 1. Mean CSPRS-BE subscale scores by therapy received.**



**Figure 2. Mean CSPRS-BE scores for the CBT and CBT-A subscales compared to CBT-A items only.**

Figure 2 shows mean CSPRS-BE subscale scores for the CBT and CBT-A subscale alongside CBT-A only items. The CBT-A only items score is highest in the CBT-A group, significantly higher than that of both the ST and CBT groups.

One way repeated measures ANOVAs were conducted to compare CSPRS-BE subscale scores across early, middle and late phases of therapy . The estimated marginal means and standard errors are presented in Table 4. Due to the finding displayed in Table 3 that CSPRS-BE mean subscale scores for the CBT-A subscale were not distinguishable between those randomised to CBT and CBT-A, this analysis breaks the subscales down into item lists so that a clearer picture can be gained as to what type of activity may be occurring in smaller item sets across phase of treatment.

No significant phase effect was found in the two therapy non-specific subscales, facilitative conditions ( $F(2,194) = 2.87, p = .064, \eta_p^2 = .029$ ) and explicit directiveness ( $F(2, 194) = 2.15, p = .119, \eta_p^2 = .022$ ). No significant phase effect was found for the ST subscale ( $F(2, 194) = 2.16, p = .119, \eta_p^2 = .022$ ) and the ST items ( $F(2, 194) = 1.90, p = .15, \eta_p^2 = .019$ ).

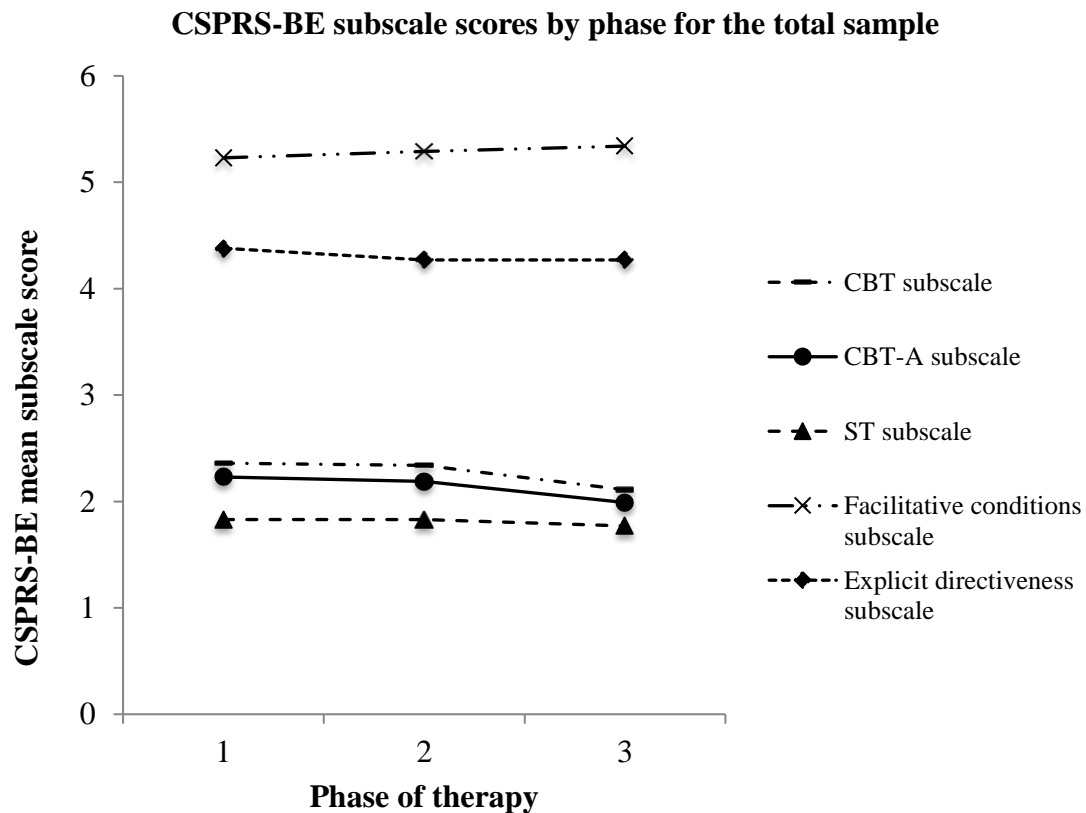
A phase effect was found for the CBT ( $F(2,194) = 19.37, p = < .001, \eta_p^2 = .166$ ) and CBT-A ( $F(2,194) = 19.21, p = < .001, \eta_p^2 = .165$ ) subscales. A phase effect was found for CBT specific items, CBT normalizing eating items, CBT-A specific items and overlap items.

Table 4

*CSPRS-BE Subscale Scores for Early, Middle and Late Treatment Phases.*

	Phase 1 mean (s.e.)	Phase 2 mean (s.e.)	Phase 3 mean (s.e.)	<i>F</i>	<i>p</i>	<i>Partial Eta Squared</i>
CBT subscale	2.36 <sup>a</sup> (.04)	2.34 <sup>a</sup> (.05)	2.11 <sup>b</sup> (.04)	19.37	< .001	.166
CBT Normalizing eating items	2.36 <sup>a</sup> (.10)	1.97 <sup>b</sup> (.09)	1.75 <sup>b</sup> (.09)	12.71	< .001	.116
CBT specific items only	2.19 <sup>a</sup> (.05)	2.27 <sup>a</sup> (.06)	1.96 <sup>b</sup> (.05)	19.43	< .001	.167
CBT-A subscale	2.23 <sup>a</sup> (.04)	2.19 <sup>a</sup> (.04)	1.99 <sup>b</sup> (.04)	19.21	< .001	.165
CBT-A specific items only	1.72 <sup>a</sup> (.07)	1.49 <sup>b</sup> (.06)	1.41 <sup>b</sup> (.05)	11.27	< .001	.104
ST subscale	1.83 (.03)	1.83 (.04)	1.77 (.03)	2.16	.119	.022
ST specific items only	1.38 (.05)	1.47 (.06)	1.40 (.05)	1.90	.15	.019
Overlap items	2.73 <sup>a</sup> (.05)	2.57 <sup>b</sup> (.05)	2.51 <sup>b</sup> (.05)	6.96	< .001	.067
Facilitative conditions subscale	5.23 (.05)	5.29 (.06)	5.34 (.05)	2.87	.064	.029
Explicit directiveness subscale	4.38 (.06)	4.27 (.06)	4.27 (.06)	2.15	.119	.022

*Note.* <sup>a</sup> Values with the same superscript are not significantly different ( $p < .05$ , Fisher's pairwise least significant difference test)



**Figure 3. CSPRS-BE subscale scores by therapy phase for the total sample**

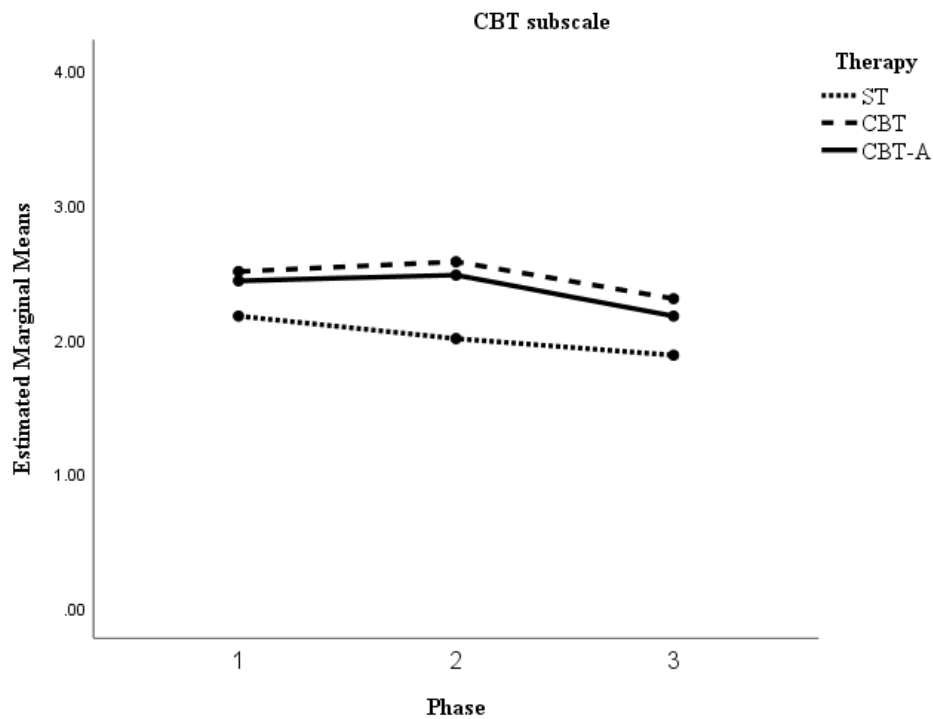
Figure 3 displays the CSPRS-BE mean subscale scores across early, middle and late phases of therapy. As indicated in Table 4, a statistically significant difference was found between phases for the CBT subscale, with a significantly lower subscale score in phase 3 than in phases 1 and 2. Similarly, for the CBT-A subscale, a significantly lower score was found in phase 3 than in phases 1 and 2. Scores on the overlap items also decreased significantly from phase 1 to phase 2. The ST, facilitative conditions and explicit directiveness subscale scores were not significantly different over the three therapy phases.

Table 5

*CSPRS-BE Subscale Scores by Early, Middle and Late Phase for the CBT, CBT-A and ST Treatment Groups.*

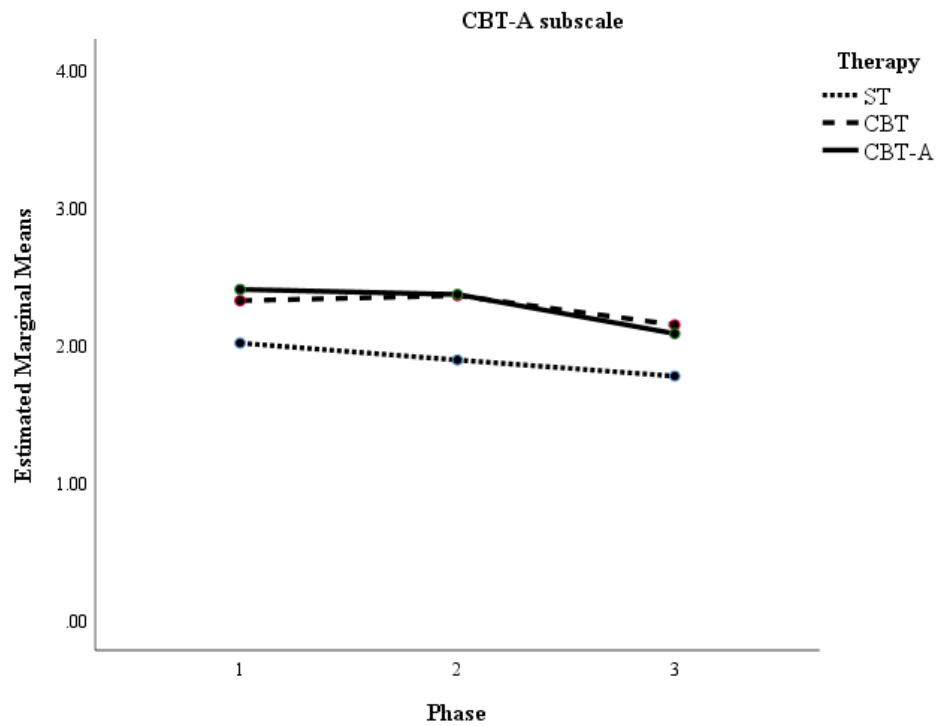
	<b>CBT</b>			<b>CBT-A</b>			<b>ST</b>			<i>F</i>	<i>p</i>	Partial Eta Squared
	Phase 1 mean (s.e.)	Phase 2 mean (s.e.)	Phase 3 mean (s.e.)	Phase 1 mean (s.e.)	Phase 2 mean (s.e.)	Phase 3 mean (s.e.)	Phase 1 mean (s.e.)	Phase 2 mean (s.e.)	Phase 3 mean (s.e.)			
ST subscale	1.70 (.05)	1.73 (.06)	1.66 (.05)	1.72 (.05)	1.64 (.06)	1.62 (.05)	2.05 (.05)	2.09 (.05)	1.99 (.05)	.53	.71	.01
ST items	1.17 (.06)	1.20 (.07)	1.17 (.05)	1.18 (.06)	1.13 (.07)	1.11 (.06)	1.76 (.06)	2.00 (.07)	1.85 (.05)	1.77	.14	.04
CBT subscale	2.50 (.06)	2.57 (.07)	2.30 (.07)	2.43 (.06)	2.47 (.07)	2.17 (.07)	2.17 (.06)	2.00 (.07)	1.88 (.07)	1.66	.16	.03
CBT items	2.39 (.07)	2.51 (.09)	2.21 (.08)	2.25 (.07)	2.41 (.09)	1.96 (.09)	1.95 (.07)	1.93 (.08)	1.74 (.08)	1.28	.28	.03
CBT normalizing eating items	2.32 (.17)	2.21 (.15)	1.65 (.14)	2.49 (.18)	2.22 (.16)	2.14 (.15)	2.29 (.17)	1.53 (.15)	1.49 (.14)	1.90	.11	.04
CBT-A subscale	2.32 (.06)	2.36 (.06)	2.14 (.06)	2.40 (.06)	2.36 (.07)	2.08 (.07)	2.01 (.06)	1.89 (.06)	1.77 (.06)	1.19	.31	.02
CBT-A items	1.53 (.09)	1.37 (.09)	1.33 (.07)	2.29 (.10)	1.85 (.09)	1.71 (.07)	1.39 (.09)	1.29 (.09)	1.22 (.07)	2.17	.08	.04
Overlap items	2.77 (.09)	2.79 (.07)	2.64 (.08)	2.82 (.09)	2.66 (.08)	2.64 (.09)	2.63 (.09)	2.27 (.07)	2.27 (.08)	1.71	.15	.03
Facilitative conditions subscale	5.14 (.08)	5.32 (.11)	5.33 (.09)	5.40 (.08)	5.31 (.11)	5.42 (.09)	5.16 (.08)	5.23 (.10)	5.28 (.09)	1.30	.27	.03
Explicit directiveness subscale	4.39 (.10)	4.34 (.10)	4.26 (.10)	4.53 (.10)	4.23 (.10)	4.37 (.11)	4.25 (.10)	4.24 (.09)	4.19 (.10)	1.07	.37	.02

Table 5 shows the CSPRS-BE mean subscale scores by phase and treatment group. Repeated measures ANOVAs compared CSPRS-BE subscales across early, middle and late phases of therapy by therapy group. No significant phase by therapy effect was found for any of the subscales or item lists. Figures 4-9 show these results graphically. In Figures 4 to 9 it can be seen that the pattern of adherence across the phases of therapy follows the phase effect seen in Table 4 and follows the therapy effect seen in Table 3.

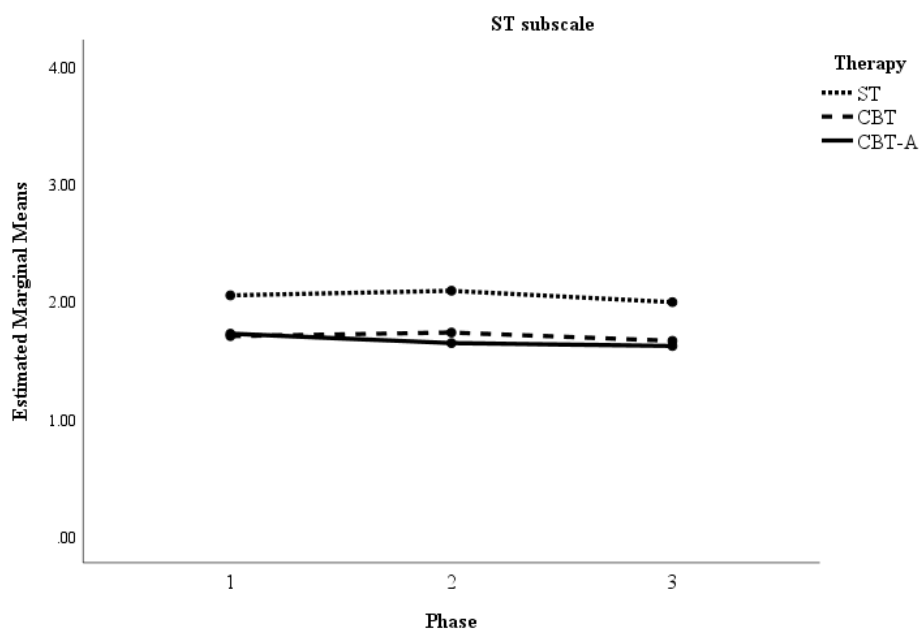


**Figure 4. CSPRS-BE CBT subscale, therapy by phase interaction**

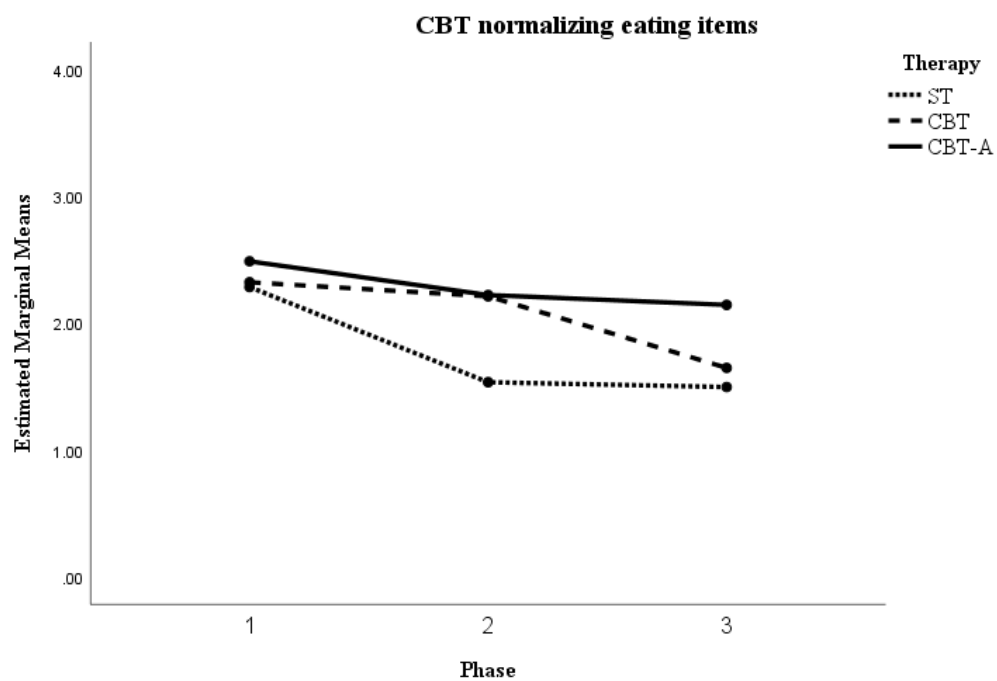




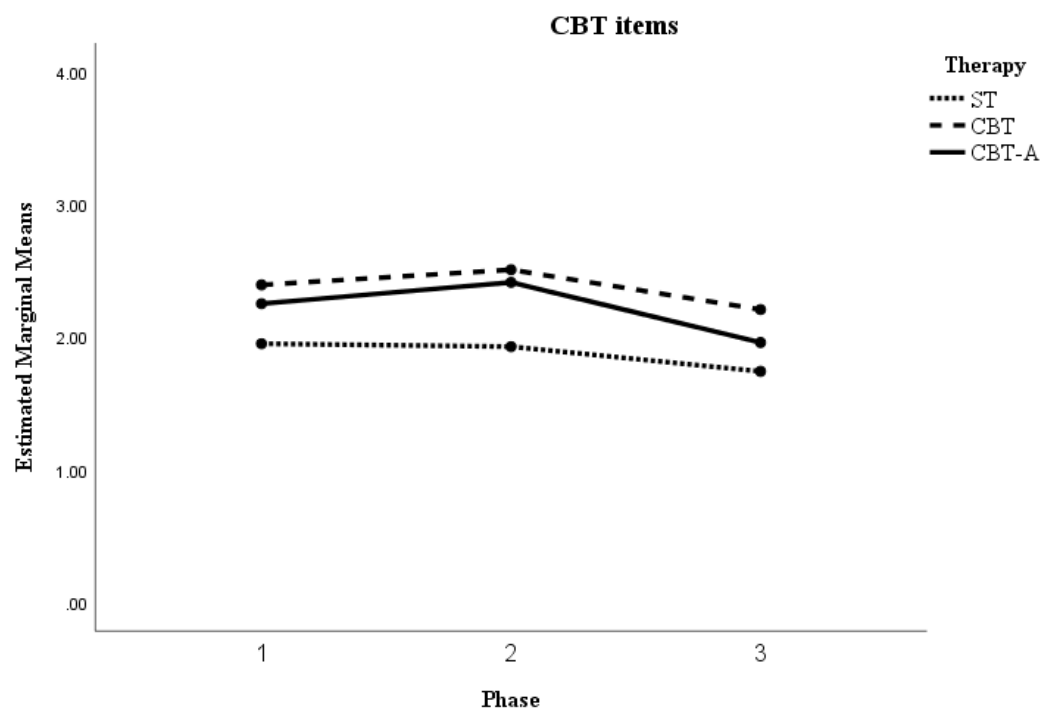
**Figure 5. CSPRS-BE CBT-A subscale, therapy by phase interaction**



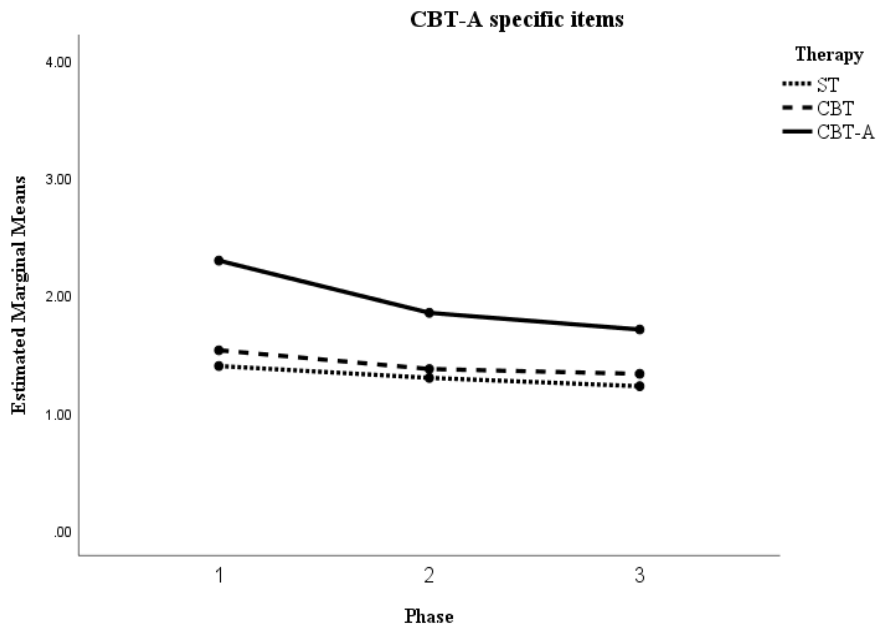
**Figure 6. CSPRS-BE ST subscale, therapy by phase interaction**



**Figure 7. CSPRS-BE CBT normalizing eating items, therapy by phase interaction**



**Figure 8. CSPRS-BE CBT items, therapy by phase interaction**



**Figure 9. CSPRS-BE CBT-A specific items, therapy by phase interaction**

Table 6

*Internal Consistency of the CSPRS-BE.*

CSPRS-BE subscale	Cronbach's $\alpha$
ST subscale	.77
ST items	.89
CBT subscale	.83
CBT items	.82
CBT Normalizing items	.58
CBT-A subscale	.84
CBT-A items	.78
Overlap items	.58
Facilitative condition subscale	.74
Explicit directiveness subscale	.21

Cronbach's alpha was calculated as a measure of internal consistency of subscales, with the results displayed in Table 6. Very high levels of internal consistency were found for the CBT and CBT-A subscales. Acceptable levels of internal consistency were found for the ST and facilitative conditions subscale. Low levels of internal consistency were found in the explicit directiveness subscale. Both the overlap items and CBT normalizing items were close to the acceptable level of .60.

## **Discussion**

The present study examined therapist adherence in the treatment of transdiagnostic binge eating disorder to ascertain whether the CBT, CBT-A and ST were distinguishable, whether therapy non-specific factors would be comparable regardless of treatment group and to investigate levels of adherence across phases of therapy. A secondary component of the current study was to utilise the CSPRS-BE, an adaptation of the CSPRS, to measure therapist adherence for different disorders and psychotherapy types than it had previously been adapted to measure.

An operational description defines adherence as therapists being rated as scoring higher on scales designed to tap the essential behaviours of their treatment approach than on scales designed to tap the essential behaviours of other treatment approaches (Hill et al., 1992). Subscale mean scores indicate that the CBT group is distinguishable from both the CBT-A and ST groups, with the CBT subscale scores elevated for the CBT therapy group and above those of the ST and CBT-A therapy groups. The ST group was distinguishable from both the CBT and CBT-A therapy groups, with ST subscale scores elevated above those of the CBT and CBT-A therapy groups. In the case of the CBT-A subscale, subscale scores were not different for CBT and CBT-A therapy groups. This is likely due to the fact that there is large proportion ( $n = 45$ ) of items that are common to both the CBT and CBT-A subscales. Due to this large overlap of items, the ten CBT-A specific items were analysed separately. The CBT-A items were elevated for those randomized to CBT-A above the CBT and ST therapy groups. This finding adds further support to the current body of research that has found therapy type to be distinguishable by raters unaware of therapy type (Andony et al., 2015; Hill et al., 1992; McIntosh, Jordan, McKenzie, et al., 2005). It is

important to note that all three psychotherapies in the RCT have underlying origins in CBT. This means that although the three treatments have distinctive characteristics and methods, there is also substantial commonality between the three therapy types. It is not, therefore, surprising that all three therapy types have mean subscale scores higher than zero on the specific subscales for the other two therapy types.

The three therapy groups in the RCT were comparable in terms of treatment outcome, as reported by McIntosh, Jordan, Carter, et al. (2005) and through determining that the three therapies are distinct, it can be affirmed that the efficacy of the three treatments is attributable to characteristics of each therapy rather than attributable to the three therapies being delivered in a similar manner. This is meaningful in terms of treatment delivery as it is beneficial to have multiple effective treatments so that in the case of one treatment not having the desired effect for a patient, another can be utilised that is validated and may be effective. Or a choice of treatments can be offered to clients and therapists as effective, validated options.

No differences were found among therapy groups for the facilitative conditions and explicit directiveness subscales. It was expected that facilitative conditions and explicit directiveness would be comparable across the different psychotherapies. This result is attributable to the non-specific subscales containing items that should be reasonably consistent in their use across over the duration of treatment. This finding is supported by the fact that no significant phase effect was found for these two therapy non-specific subscales. This demonstrates consistent use of these items across both therapy type and phase and supports the hypothesis that the non-specific subscales would be comparable regardless of treatment type. Items within the two therapy non-specific subscales are important to therapeutic alliance and promotion of a healthy psychotherapy environment.

Phase effects were found when analyzing the whole data set across early, middle and late phases of therapy for some CSPRS-BE subscales. A phase effect was found for CBT specific items, CBT normalizing eating items, CBT-A specific items and overlap items. These phase effects were not unexpected due to the fact that there were phase effects detected for the larger subscales containing the specific items. This evidence supports the hypothesis that different therapy content is occurring over the different phases of psychotherapy. When mean subscale scores were analyzed for a phase by therapy interaction, no significant interaction effects were found. Due to mixed findings reported in other studies about what happens to therapist adherence across phase, this finding was not unexpected. These findings replicate those reported by Imel et al. (2011) who found no significant difference in adherence across treatment phase by therapy. An explanation as to why this could be is that therapists are consistently using techniques across the three phases of therapy. Many factors could influence therapist adherence across phase, with one possible explanation for change in adherence relating to either positive or negative patient progress. If a patient is not responding to the therapy being administered, a therapist may either reduce their use of therapy specific techniques related to the psychotherapy type or increase them in the hope of promoting change for the patient.

The internal consistency of the CSPRS-BE scale was found to be very good overall. Low levels of internal consistency were found for the explicit directiveness subscale, but this could be explained by the fact that the explicit directiveness subscale is comprised of only four items. A low Cronbach's alpha for this particular subscale has been reported by Hill et al. (1992) also. A below acceptable threshold Cronbach's alpha for CBT normalizing eating items and overlap items is also

reported. The CBT normalizing eating scale is comprised of three items so this may be acting in a similar way to the explicit directiveness subscale.

Future research aimed at investigating whether increases and decreases in therapist adherence are related to outcome may be important. Currently, therapist adherence is deemed a measure of elevation in adherence when compared with other psychotherapy types. This creates difficulties when a single psychotherapy is being examined, as there is not another psychotherapy to be compared against. Movement towards therapist adherence being measured against an *a priori* threshold has been seen in the ACF measurement scale used by Brauhardt et al. (2014) . Adoption of a threshold would allow for further research as to whether there is a certain minimum level of adherence that needs to be met for psychotherapy to be determined adherent to a particular psychotherapy approach.

Measurement and report of therapist adherence provides information to validate the design, execution and efficacy of the RCT. The CSPRS-BE has been found to be reliable and valid in measuring therapy adherence and this supports the capability of the CSPRS to be adapted to measure different psychotherapies. Measurement of therapist adherence helps to validate the internal validity of psychotherapy and can give support to psychotherapy outcome studies.

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## Appendix A

10 September 2004

### Canterbury Ethics Committees

4th Floor, 250 Oxford Terrace  
P.O. Box 3877  
Christchurch  
Fax (03) 372 1015

Professor Peter Joyce  
Psychological Medicine  
University of Otago  
PO Box 4345  
Christchurch

Dear Professor Joyce

#### **Enhancing Psychotherapy for Bulimia Nervosa and Binge Eating Disorder**

**Investigators: Prof P Joyce, Dr V McIntosh, J Jordan, Dr J Carter, Dr J McKenzie, Dr J Latner, Dr F Carter, Assoc Prof C Frampton**

**Ethics Ref: CTB/04/08/139**

Thank you for your letter dated 6 September 2004 in response to the Committee's suggestions. The above study has now been given final ethical approval by the Canterbury Ethics Committee.

#### **Approved Documents**

Enhancing Psychotherapy for Bulimia Nervosa and Binge Eating Disorder - Study Instruments

Part I of II (P.I. Peter Joyce)

Enhancing Psychotherapy for Bulimia Nervosa and Binge Eating Disorder - Study Instruments

Part II of II (P.I. Peter Joyce)

Information sheet and consent form version dated 3 September 2004

#### **Certification**

The Committee is satisfied that this study is not being conducted principally for the benefit of the manufacturer or distributor of the medicine or item in respect of which the trial is being carried out.

#### **Accreditation**

This Committee is accredited by the Health Research Council and is constituted and operates in accordance with the Operational Standard for Ethics Committees, March 2002.

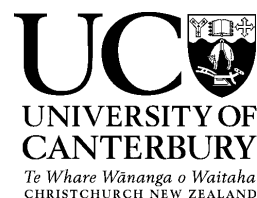
#### **Progress Reports**

The study is approved until 30 June 2009. The Committee will review the approved application annually. A progress report is required for this study in June each year. You will be sent a form requesting this information prior to the review date. Please note that failure to complete and return this form may result in the withdrawal of ethical approval. A final report is also required at the conclusion of the study.

## Appendix B

### HUMAN ETHICS COMMITTEE

Secretary, Rebecca Robinson  
Telephone: +64 03 369 4588, Extn 94588  
Email: [human-ethics@canterbury.ac.nz](mailto:human-ethics@canterbury.ac.nz)



2018/07/EX

29 August 2018

Charlotte Falloon  
Psychology  
University of Canterbury

Dear Charlotte,

I can confirm that your request for an exemption for the research project titled “Therapist Adherence in the Treatment of Transdiagnostic Binge Eating Disorders” has been reviewed and approved by the Human Ethics Committee.

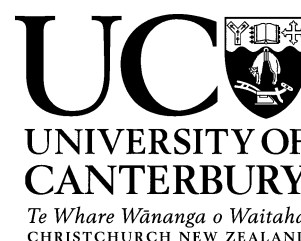
Yours sincerely

A handwritten signature in black ink that reads 'R. Robinson'. The signature is written in a cursive, slightly slanted style. Below the signature is the text 'pp.' in a small, italicized serif font.

Professor Jane Maidment  
**Chair**  
***University of Canterbury Human Ethics Committee***

## Appendix C

### Ngāi Tahu Consultation and Engagement Group



Monday 13 August 2018

Tēnā koe Charlotte Falloon

RE: Therapist adherence in the treatment of trans diagnostic binge eating  
This letter is on behalf of the Ngāi Tahu Consultation and Engagement Group (NTCEG). I have considered your proposal and acknowledge it is a worthwhile and interesting project and you are clear about how you ought to take participants' (cultural) needs into account if and when applicable.

Given the scope of your project, no issues have been identified and further consultation with Māori is not required.

Thank you for engaging with the Māori consultation process. This will strengthen your research proposal, support the University's Strategy for Māori Development, and increase the likelihood of success with external engagement. It will also increase the likelihood that the outcomes of your research will be of benefit to Māori communities. We wish you all the best with your current project and look forward to hearing about future research plans.

The Ngāi Tahu Consultation and Engagement Group would appreciate a summary of your findings on completion of the current project. Please feel free to contact me if you have any questions.

Ngā mihi whakawhetai ki a koe

Henrietta Latimer (on behalf of the NTCEG)

A handwritten signature in blue ink, appearing to read 'H. Latimer'.

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## Appendix D

### **Collaborative Study Psychotherapy Rating Scale – Adapted for Binge Eating (CSPRS-BE)**

#### **Subscales and Items:**

**CBT subscale:** 31 CBT items + 14 overlap items + 3 CBT Normalizing Eating items = 48 items

**CBT-A subscale:** 31 CBT items + 10 CBT-A specific items + 14 overlap items = 55 items

**Schema Therapy Subscale:** 28 ST items + 14 overlap items = 42 items

**Non-specific subscale:** 12 items

#### **OVERLAP ITEMS (14) (common to CBT, CBT-A and Schema Therapy; but would not be included in other therapies, such as IPT)**

1. Education about BN or BED
2. Addressing slow change
4. Encourages independence
5. Advice giving
22. Improvements expected
28. Review since last session
35. Explanation for therapist's direction
39. Adherence to regime
42. Negotiating therapy content
50. General life change expected
57. Linking improvements to therapy
62. Adjusting goals based on progress
79. Encouragement of eating changes
81. Side effects education

#### **CBT Normalizing eating ITEMS (3) (NOT CBT-A)**

51. Concern about eating and weight
61. Eating change rationale
100. Education about regular eating

#### **CBT ITEMS (31) (common to CBT and CBT-A)**

9. Cognitive behavioural therapy rationale
11. Searching for alternative explanations
14. Recording thoughts
15. Scheduling/structuring activities
17. Weight focus
23. Self-monitoring
25. Practicing rational responses
26. Adaptive/functional value of beliefs
27. Distancing of beliefs
32. Increasing pleasure and mastery
34. Exploring personal meaning
36. Exploring underlying assumptions
37. Identifying emotional cues for binge eating
38. Homework assigned

- 40. Relate improvement to cognitive and behavioural change
- 43. Relationship of thoughts and feelings
- 46. Collaboration
- 49. Realistic consequences
- 54. Setting and following agenda
- 63. Manipulating behaviour via cues or consequences
- 66. Skills training
- 72. Examine available evidence
- 75. Reporting cognitions
- 76. Recognising cognitive errors
- 77. Didactic persuasion
- 80. Substituting more helpful thoughts
- 82. Summarising
- 87. Testing beliefs prospectively
- 88. Specific examples
- 89. Planning/practicing alternative behaviours
- 90. Homework reviewed

#### **CBT-A specific ITEMS (10)**

- 3. Appetite focused therapy rationale
- 6. Education about appetite
- 18. Self-monitoring appetite and/or satiety
- 19. Hunger as a cue for binge eating
- 44. Identifying alternative possible non-food-related responses to emotional cues
- 53. Education about nutrition related to satiety
- 58. Education about protein and satiety
- 67. Psychoeducation about food volume/energy density and satiety
- 68. Psychoeducation about lower GI foods and satiety
- 91. Guiding choice of foods with higher satiating potential

#### **Schema therapy specific ITEMS (28)**

- 7. Test schemas prospectively
- 8. Coping styles
- 10. Schema/modes education
- 13. Schema therapy rationale
- 16. Identification of schema/mode
- 24. Behavioural pattern breaking
- 47. Coping skills
- 52. Didactic persuasion re schemas
- 55. Schema formulation
- 56. Activation of schema/modes/coping styles
- 64. Link schemas to eating disorder symptoms or life problems
- 65. Use of imagery for assessment
- 70. Reattribution
- 71. Practicing helpful schemas
- 73. Reality test
- 74. Reattribution to schema
- 78. Needs education
- 84. Use of experiential techniques
- 85. Safe place imagery



- 86. Empathetic confrontation
- 92. Experience of affect
- 93. Affect link to schema
- 94. Therapist/client relationship
- 95. Therapy link to rest of life
- 96. Client feelings in therapy
- 97. Exploration of childhood
- 98. Schema link to childhood
- 99. Use of role-play

**NON-SPECIFIC Items (12)**

**Facilitative conditions**

- 12. Empathy
- 21. Rapport
- 30. Warmth
- 31. Supportive encouragement
- 41. Involvement
- 45. Convey expertise
- 48. Therapist's communication style
- 59. Formality (negatively scored)

**Explicit directiveness**

- 20. Level of verbal activity
- 33. Receptive listening (negatively scored)
- 60. Subtle guidance (negatively scored)
- 69. Explicit guidance

## Appendix E

ID: \_\_\_\_\_ Session #: \_\_\_\_\_

Therapist: \_\_\_\_\_

Session Date: \_\_\_\_\_

Rater: \_\_\_\_\_

Date rated: \_\_\_\_\_

**1. EDUCATION ABOUT BN/BED:** To what extent did the therapist provide written or verbal education about BN/BED, consequences or materials related to therapy recommendations? (–171)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**2. ADDRESSING SLOW CHANGE:** Did the therapist address any slowness to respond to the interventions and provide support and encouragement to make changes? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**3. APPETITE FOCUSED THERAPY RATIONALE:** Did the therapist provide a rationale which emphasised how overeating results in a relative insensitivity to appetite and satiety, and the need to recognize and respond to appetite and satiety in order to alleviate the client's eating disorder? (–)

1	2	3	4	5	6	7
not at all		some discussion		considerable discussion		extensive discussion

**4. ENCOURAGES INDEPENDENCE:** Did the therapist encourage the client's independence from the therapist in dealing with her/his problems? (16-39)

1	2	3	4	5	6	7
no encouragement of the client's independence		some encouragement of the client's independence		much encouragement of the client's independence		extensive encouragement of the client's independence from the therapist

**5. ADVICE GIVING:** To what extent did the therapist give specific advice or suggestions regarding eating or other issues? (–170)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**6. EDUCATION ABOUT APPETITE:** To what extent did the therapist provide written or verbal education about appetite and binge eating? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**7. TEST SCHEMAS PROSPECTIVELY:** Did the therapist encourage the client to test schemas prospectively? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**8. COPING STYLES:** Did the therapist assist the client to identify self-defeating or inappropriate behaviours (dysfunctional coping styles) the client is engaging in outside of the session? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**9. COGNITIVE BEHAVIOURAL THERAPY RATIONALE:** Did the therapist provide a rationale which emphasised the importance of evaluating the accuracy of the client's beliefs and changing inaccurate beliefs in order to alleviate the client's eating disorder? (55–99)

1	2	3	4	5	6	7
not at all		some discussion		considerable discussion		extensive discussion

**10. SCHEMA (MODES) EDUCATION:** Did the therapist educate the client about one or more schemas or modes? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**11. SEARCHING FOR ALTERNATIVE EXPLANATIONS:** Did the therapist help the client to consider alternative explanations for events besides the client's initial explanations for those events? (64–118)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**12. EMPATHY:** Was the therapist empathic toward the client (i.e. did she/he convey an intimate understanding of and sensitivity to the client's experiences and feelings)? (13–34)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**13. SCHEMA THERAPY RATIONALE:** Did the therapist provide a rationale which emphasised the role of early experiences resulting in the development of schemas/modes, which in turn drive eating disorder behaviours? (–)

---

1	2	3	4	5	6	7
not at all		some discussion		considerable discussion		extensive discussion

14. RECORDING THOUGHTS: Did the therapist encourage the client to record thoughts between sessions OR review the client's records of her/his thoughts? (76-140)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

15. SCHEDULING/STRUCTURING ACTIVITIES: Did the therapist work with the client to schedule OR structure one or more specific activities for the purpose of increasing the likelihood that the client will initiate OR follow through on those activities? (74-135)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

16. IDENTIFICATION OF SCHEMA/MODES: Did the therapist label or ask client to label one or more schema (or modes)? (–)

*Modes are: the abandoned/abused child, the angry/impulsive child, the punitive parent(side), the detached protector and the healthy adult or an equivalent term.*

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

17. WEIGHT FOCUS: to what extent did the therapist focus on issues to do with the client's weight? (–174)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

18. SELF-MONITORING APPETITE AND/OR SATIETY: Did the therapist encourage the client to record appetite and/or satiety between sessions OR review the client's records of appetite and/or satiety? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

19. HUNGER AS CUE FOR EATING: Did the therapist encourage the client to recognize hunger as a cue for eating? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

20. LEVEL OF VERBAL ACTIVITY: How much did the therapist talk? (17-42)

1	2	3	4	5	6	7
said little or nothing		some		quite a lot		talked extensively

**21. RAPPORT:** How much rapport was there between therapist and client (i.e. how well did the therapist and client get along)? (12-33)

1	2	3	4	5	6	7
total absence of rapport		some rapport		considerable rapport		excellent rapport

**22. IMPROVEMENTS EXPECTED:** Did the therapist discuss specific symptom relief that might be expected with normalized eating and cessation of binge eating? (84-152)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**23. SELF-MONITORING:** Did the therapist encourage the client to record feelings, activities, or events between sessions OR review the client's records of feelings, activities, or events? (75-138)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**24. BEHAVIOURAL PATTERN-BREAKING:** Did the therapist assign behavioural homework or recommend that the client tries something outside of a session? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**25. PRACTICING RATIONAL RESPONSES:** Did the therapist and client practice possible rational responses to the client's negative thoughts or beliefs? (69-126)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**26. ADAPTIVE/FUNCTIONAL VALUE OF BELIEFS:** Did the therapist guide the client to consider whether or not maintaining a specific belief is adaptive for the client (regardless of whether or not it is accurate)? (66-121)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**27. DISTANCING OF BELIEFS:** Did the therapist encourage the client to view her/his thoughts as beliefs which may or may not be true rather than as established facts? (61-111)

1	2	3	4	5	6	7
---	---	---	---	---	---	---

not at all		some		considerably		extensively
------------	--	------	--	--------------	--	-------------

28. REVIEW SINCE LAST SESSION: to what extent did the therapist review the eating/eating disorder behaviours (including exercise etc) since the last session? (= 173)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

29. OPTIMISTIC REASSURANCE: Did the therapist attempt to reassure the client that the problems she encountered would eventually subside if the client adhered to the therapeutic interventions? (87-155)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

30. WARMTH: Did the therapist convey warmth? (11-32)

1	2	3	4	5	6	7
not at all or very little		some		a lot		very much

31. SUPPORTIVE ENCOURAGEMENT: Was the therapist supportive of the client by acknowledging the client's gains during therapy OR by reassuring the client that gains will be forthcoming? (7-25)

1	2	3	4	5	6	7
not at all		some		considerably		extremely

32. INCREASING PLEASURE AND MASTERY: Did the therapist encourage the client to engage in activities which would be pleasurable to the client or from which the client would obtain a sense of accomplishment? (73-133)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

33. RECEPTIVE LISTENING: Did the therapist appear to allow silence to continue (or use minimal encouragements such as "uh-huh", "mm-hmm", "okay") as a means of encouraging the client to talk. (20-46)

1	2	3	4	5	6	7
not at all		some		a lot		very much

**34. EXPLORING PERSONAL MEANING:** Did the therapist probe for beliefs related to a thought the client reported in order to explore the personal meaning associated with the client's initial thought? (58-105)

1	2	3	4	5	6	7
not at all		some exploration of client's personal meaning system		considerable exploration of client's personal meaning system		extensive exploration of the client's personal meaning system which included a discussion of the impact of those related beliefs on the client's affect

**35. EXPLANATION FOR THERAPIST'S DIRECTION:** Did the therapist explain to the client the therapist's reasons for pursuing a particular topic in the session? (79-144)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**36. EXPLORING UNDERLYING ASSUMPTIONS:** Did the therapist explore with the client a general belief that underlies many of the client's specific negative thoughts and beliefs? (60-109)

1	2	3	4	5	6	7
not at all		some mention of underlying assumption(s)		considerable discussion of client's underlying assumption(s)		extensive discussion of client's underlying assumption(s)

**37. IDENTIFYING EMOTIONAL CUES FOR EATING:** Did the therapist encourage the client to recognize situations when eating was triggered by emotional cues? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**38. HOMEWORK ASSIGNED:** Did the therapist or client develop one or more specific assignments for the client to engage in between sessions? (72-130)

1	2	3	4	5	6	7
not at all		some attempt to develop homework		considerable attempt to develop homework		extensive attempt to develop homework

**39. ADHERENCE TO REGIME:** Did the therapist discuss with the client her adherence to the prescribed normalized eating plan or other therapeutic recommendations (e.g. limiting exercise, stopping purging)? (91-159)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

40. RELATE IMPROVEMENT TO COGNITIVE CHANGE: Did the therapist relate improvement that has occurred in the client's depressive symptoms or related problems to changes in the client's beliefs? (56-101)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

41. INVOLVEMENT: How involved was the therapist? (10-30)

1	2	3	4	5	6	7
very detached		somewhat detached		mainly involved		very involved

42. NEGOTIATING THERAPY CONTENT: Did the therapist negotiate with the client assignments, changes in direction, or major emphases of the session in a way that gave the client opportunity to have input? (78-142)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

43. RELATIONSHIP OF THOUGHTS AND FEELINGS: Did the therapist encourage the client to relate affective states that the client had experienced (OR will experience in the future) to the client's ongoing thoughts? (54-98)

1	2	3	4	5	6	7
not at all		some discussion		considerable discussion		extensive discussion

44. IDENTIFYING ALTERNATIVE POSSIBLE NON-FOOD-RELATED RESPONSES TO EMOTIONAL CUES: Did the therapist encourage the client to consider other possible non-food-related responses to emotional cues? (—)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

45. CONVEY EXPERTISE: Did the therapist convey that she/he understood the client's problems and is able to help the client? (8-27)

1	2	3	4	5	6	7
not at all		some		considerably		very much

46. COLLABORATION: Did the therapist actively attempt to engage the client in working together to explore therapeutic issues? (15-37)

1	2	3	4	5	6	7
therapist made no attempt to involve the client in working <u>together</u>		therapist occasionally attempted to involve the client in working <u>together</u>		therapist frequently attempted to involve the client in working <u>together</u>		throughout the session therapist actively solicited the client's involvement in working <u>together</u>



**47. COPING SKILLS:** Did the therapist discuss using skills to cope with life problems (or follow-up on previously learnt coping skills) outside the session? (for example, flashcards; transitional object; diary or schema diary; relaxation or controlled breathing; audio tape; reaching out to friends; anger management; nurturing abandoned child; imaginary dialogue; problem solving; labeling modes or schemas; call therapist/office; writing letters; assertive communication skills; identifying, acknowledging or expressing feelings; behavioural experiments) (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**48. THERAPIST'S COMMUNICATION STYLE:** How interesting is the therapist's style of communication? (Consider (1) the vividness of her/his language; (2) the originality of her/his ideas; (3) the liveliness of her/his manner of speaking.) (9-29)

1	2	3	4	5	6	7
dull uninteresting		less interesting than average		more interesting than average		very interesting

**49. REALISTIC CONSEQUENCES:** Did the therapist work with the client to determine what the realistic consequences would be if the client's belief proved to be true? (65-120)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**50. GENERAL LIFE CHANGE EXPECTED:** Did the therapist discuss general improvements in the client's general functioning in life (not just eating symptoms) that might be expected with cessation of binge eating and resumption of normalized eating? (85-153)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**51. CONCERN ABOUT EATING AND WEIGHT:** Did the therapist assess the client's concerns about changing her eating and/or weight, and address any concerns? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**52. DIDACTIC PERSUASION RE SCHEMAS:** Did the therapist use didactic persuasion to urge the client to change maladaptive schemas? (67-123)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**53. EDUCATION ABOUT NUTRITION RELATED TO SATIETY:** To what extent did the therapist provide written or verbal education about nutrition related to satiety? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**54. SETTING AND FOLLOWING AGENDA:** Did the therapist work collaboratively with the client to formulate and follow a specific agenda for the session? (1-13)

1	2	3	4	5	6	7
not at all		some		considerably		thoroughly

**55. SCHEMA FORMULATION:** Did the therapist provide a schema (or modes) formulation that incorporated childhood experiences, schemas or modes and eating disorder behaviours? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**56. ACTIVATION OF SCHEMA/MODES/COPING STYLES:** Did the therapist notice when the client's schema (mode, coping style) is activated during a session and point it out to client? (here and now interactions in the sessions) (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**57. LINKING IMPROVEMENTS TO THERAPY:** Did the therapist relate positive change to changes made (e.g. normalized eating changes) through therapy? (86-154)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**58. EDUCATION ABOUT PROTEIN AND SATIETY:** To what extent did the therapist provide written or verbal education about protein and satiety? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**59. FORMALITY:** Did the therapist adopt a formal stance in her/his interactions with the client? (Defined as: Strict adherence to the therapeutic role such that little of the therapist's own personality emerges during the session) (14-36)

1	2	3	4	5	6	7
not at all formal; therapist emerged as a person		somewhat formal (primarily informal)		considerably formal		extremely formal; therapist did not emerge as a person

**60. SUBTLE GUIDANCE:** How much did the therapist direct or guide the session in a subtle way? (19-45)

1	2	3	4	5	6	7
therapist offered no guidance OR guidance was not subtle		some		considerably		extremely

**61. EATING CHANGE RATIONALE:** Did the therapist present a rationale emphasising the need for eating change in order to alleviate ED symptoms? (81-147)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**62. ADJUSTING GOALS BASED ON PROGRESS:** Did the therapist discuss and adjust the goals set based on client progress and involve the client in goal setting? (90-158)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**63. MANIPULATING BEHAVIOUR VIA CUES OR CONSEQUENCES:** Did the therapist help the client to arrange for cues (i.e. stimulus control) OR consequences (i.e. reinforcement or punishment) for the client's specific thoughts or behaviours in order to manipulate the occurrence of those behaviours? (77-141)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**64. LINK SCHEMAS (OR MODES) TO EATING DISORDER SYMPTOMS OR LIFE PROBLEMS:** Did the therapist make links between a specific eating disorder symptom or life-problem and one or more schemas (or modes)? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**65. USE OF IMAGERY FOR ASSESSMENT:** Did the therapist use imagery for the assessment of schemas (or modes)? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**66. SKILLS TRAINING:** Did the therapist attempt to teach the client skills (e.g. assertiveness, social skills, task relevant skills) in the session? (71-129)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**67. EDUCATION ABOUT FOOD VOLUME/ENERGY DENSITY AND SATIETY:**

To what extent did the therapist provide written or verbal education about food volume/energy density and satiety? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**68. EDUCATION ABOUT LOWER GI FOODS AND SATIETY:** To what extent did the therapist provide written or verbal education about lower GI foods and satiety? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**69. EXPLICIT GUIDANCE:** How much did the therapist direct or guide the session in an explicit way? (18-42)

---

1	2	3	4	5	6	7
therapist offered no guidance OR guidance was not explicit		some		considerably		extremely

**70. REATTRIBUTION:** Did the therapist help the client to reattribute to others negative treatment of the client as a child to others' deficiencies instead of the client's deficiencies? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**71. PRACTICING HELPFUL SCHEMAS:** Did the therapist encourage or assist the client to practice possible more helpful schemas in response to the client's maladaptive schemas? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**72. EXAMINE AVAILABLE EVIDENCE:** Did the therapist help the client to use currently available evidence or information (including the client's prior experiences) to test the validity of the client's beliefs? (62-113)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**73. REALITY TEST:** Did the therapist help the client to examine or test out whether a particular schema or schema-driven reaction is accurate? (–)

---

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**74. REATTRIBUTION TO SCHEMA:** Did the therapist help the client to reattribute life-problems or symptoms to schemas (or modes) instead of inherent personal flaws? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**75. REPORTING COGNITIONS:** Did the therapist ask the client to report specific thoughts (as verbatim as possible) that the client experienced either in the session OR in a situation which occurred prior to the session? (57-103)

1	2	3	4	5	6	7
not at all		infrequent requests		several requests		frequent requests for specific thoughts

**76. RECOGNISING COGNITIVE ERRORS:** Did the therapist help the client to identify specific types of cognitive distortions or errors (e.g. all-or-none thinking, over-generalisation) that were present in the client's thinking? (59-107)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**77. DIDACTIC PERSUASION:** Did the therapist use didactic persuasion to urge the client to change her/his belief(s)? (67-123)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**78. NEEDS EDUCATION:** Did the therapist educate the client about universal/common needs and/or value of emotions (and/or opinion)? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**79. ENCOURAGEMENT OF EATING CHANGES:** To what extent did the therapist encourage the client to make changes in her eating? (–167)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**80. SUBSTITUTING MORE HELPFUL THOUGHTS:** Did the therapist encourage the client to substitute a more positive belief for another (whether or not the substitute belief was more accurate or realistic), solely because the client would feel better if she/he thought another way? (68-125)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**81. SIDE EFFECTS EDUCATION:** Did the therapist discuss the possibility of side effects of normalized eating or adjusting to weight gain e.g. describe those most likely to occur or discuss procedures for handling side effects? (94-162)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**82. SUMMARISING:** Did the therapist summarize OR encourage the client to summarize key issues discussed either in a previous session or in the current session? (80-145)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**83. CLIENT-GENERATED DISCUSSION:** To what extent did the therapist follow the client's lead in generating issues for discussion? (-168)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**84. USE OF EXPERIENTIAL TECHNIQUES:** Did the therapist use experiential techniques such as imagery, safe place imagery, schema dialogue or two chair technique to assess or promote schema (or mode) change? (-)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**85. SAFE PLACE IMAGERY:** Did the therapist encourage the client to develop a safe place image or to use safe place imagery as a grounding mechanism? (-)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**86. EMPATHIC CONFRONTATION:** Did the therapist encourage, push or confront client as appropriate (such as to deal with upsetting feelings, make life change, do homework, practice coping skill) or set limits as appropriate when the client "acted out" in an empathic manner? (-)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

**87. TESTING BELIEFS PROSPECTIVELY:** Did the therapist encourage the client to 1) engage in specific behaviours for the purpose of testing the validity of her/his beliefs, OR 2) make explicit predictions about external events so that the outcomes of those events could serve as tests of those predictions, OR 3) review the outcome of a previously designed prospective test? (63-115)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

88. SPECIFIC EXAMPLES: Did the therapist urge the client to give concrete, specific examples of beliefs OR events? (21-47)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

89. PLANNING/PRACTICING ALTERNATIVE BEHAVIOURS: Did the therapist work with the client to plan OR to practice alternative overt behaviours for the client to utilise outside of therapy? (70-128)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

90. HOMEWORK REVIEWED: Did the therapist review previously assigned homework with the client? (2-16)

1	2	3	4	5	6	7
did not OR none assigned		some attention		considerable attention		extensively reviewed homework AND integrated into the rest of the session

91. GUIDING CHOICE OF FOODS WITH HIGHER SATIATING POTENTIAL:  
To what extent did the therapist guide the client's choice of foods with higher satiating potential? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

92. EXPERIENCE OF AFFECT: Did the therapist assist the client to express and/or experience a strong emotion, opinion, need? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

93. AFFECT LINK TO SCHEMA: Did the therapist assist the client to link feelings to schema or modes? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

94. THERAPIST/CLIENT RELATIONSHIP: Did the therapist try to resolve problems that are arising in the therapy relationship? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

95. THERAPY LINK TO REST OF LIFE: Did the therapist link aspects of therapy and the therapeutic relationship to situations in the client's life outside therapy? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

96. CLIENT FEELINGS IN THERAPY: Did the therapist ask directly about the client's feelings or thoughts regarding the therapy relationship or about the therapist him/herself? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

97. EXPLORATION OF CHILDHOOD: Did the therapist explore aspects of the client's childhood? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

98. SCHEMA LINK TO CHILDHOOD: Did the therapist relate one or more schemas (or modes) to the client's early life (including childhood)? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

99. USE OF ROLE PLAY: Did the therapist use role play to rehearse handling real life situations outside the session? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively

100. EDUCATION ABOUT REGULAR EATING: To what extent did the therapist provide written or verbal education about the importance of regular eating ? (–)

1	2	3	4	5	6	7
not at all		some		considerably		extensively